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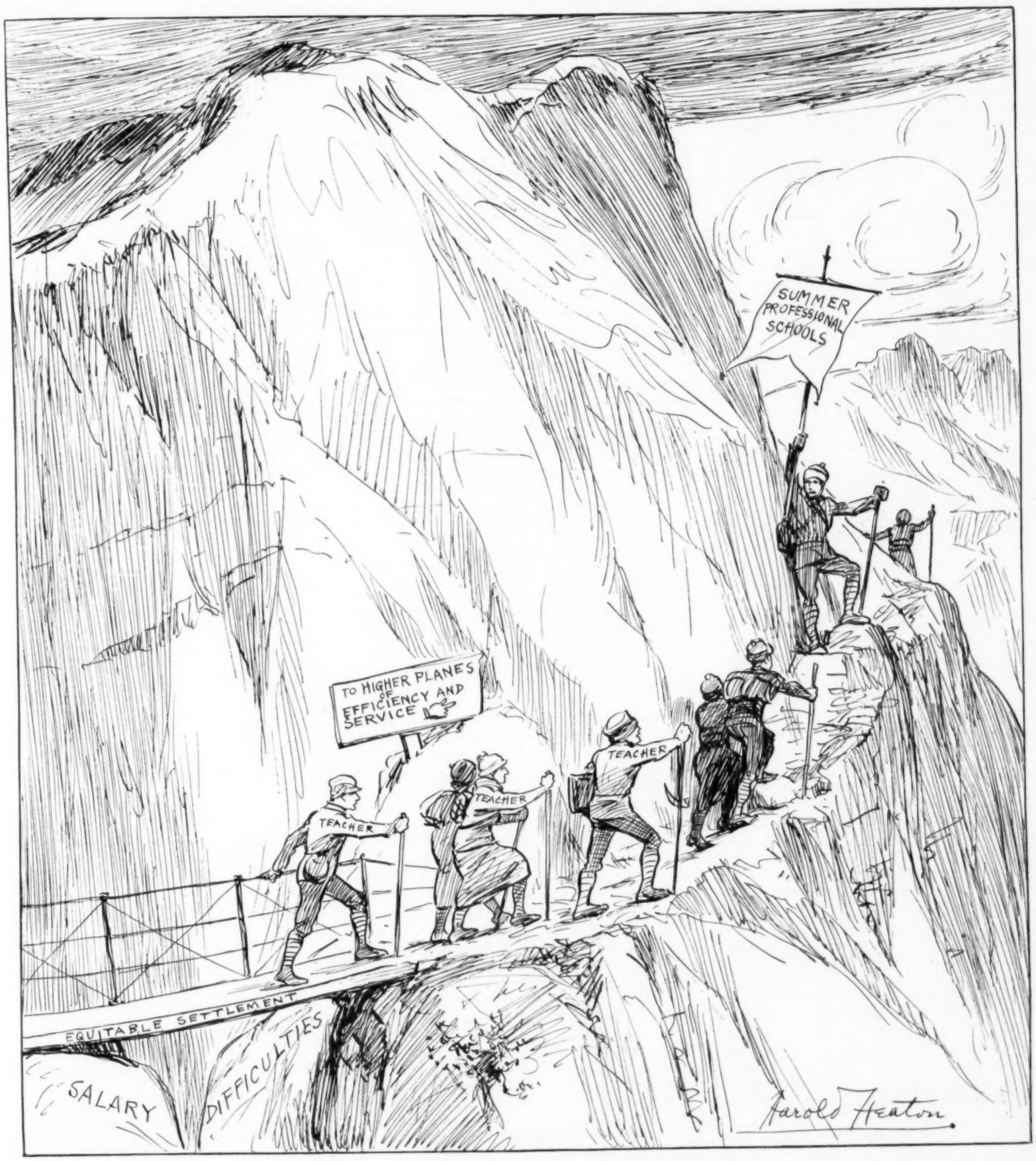

Excelsior!

The Selection of the School Superintendent

W. S. Deffenbaugh, Specialist in School Administration, U. S. Bureau of Education

The election of a superintendent of schools is one of the biggest problems that can confront a board of education, which should proceed in as deliberate a manner in his selection as does a board of directors of a private corporation when selecting its chief executive officer. An unwise choice is disastrous to the school system. If, however, the board elects a big, broad-gauge executive and delegates to him the professional management of the schools, its troubles are practically at an end during the superintendent's term of office.

The question is, How should a board of education proceed to elect a superintendent of the schools of its city? The first thing to do is to decide upon the qualifications that he should possess for the salary that can be paid. Among the questions that progressive school boards are asking when in search of a school superintendent are: What is his character? What sort of personality has he? What experience has he had? 1. As a teacher? 2. As superintendent? Is he a good executive? Has he been successful in the positions that he has held? Has he in his present position succeeded in interesting the people in their schools? What did he actually accomplish in his present position and former positions? What education has he? Is he a college graduate? Has he made a study of the problems of school administration? Does he maintain a good morale among his present corps of teachers?

The board of education that does not ask these and other questions when it is considering the selection of a new superintendent is not taking the matter as seriously as it should.

As a rule only college graduates who have had courses in education should be considered. Graduate work in educational courses would doubtless be a better standard.

Experience as teacher or supervisor is usually required. In cities of 5,000 or more population it is a rare occurrence for anyone to be elected as superintendent who has not had experience in some supervisory position, either as superintendent in a smaller place or as an elementary or high school principal.

Other Needed Qualifications

Experience alone does not qualify a person for a superintendency. He may be a skilled teacher or principal of an elementary school, yet a failure as superintendent because of a lack of the necessary executive ability. If he fails as an executive he fails as a superintendent whatever other qualifications he may possess. Character is absolutely essential, but a man may be a saint and not a good school superintendent. Scholarship is essential, but many scholarly men fail as superintendents because they lack ability to execute, to lead, to maintain a high morale among the teachers and to look after the business affairs of the school district. It is as the president of a city board of education says regarding the essential qualifications of a school superintendent. "His ability to teach all subjects and grades or any given subject or grade is of small importance, but his ability to choose and retain in his employ those who are willing and able to perform the particular work allotted to them and to carry responsibility for the success of such work is of great importance. In the matter of teaching he should be able to distribute the responsibility to subordinates, judging their work by results rather than by detail and to coordinate the work to a common end."

He must know how, when, where and what to buy and not to buy. He must be able to eliminate waste, both of energy and of material. He must be economical, but not penurious; thrifty, but not stingy. He must see that complete accounts are kept and be able to understand and interpret them and to know at all times the exact financial status of his plant.

He must be a salesman. His product is education and his customers are the parents of his city. The success of his plant depends upon his satisfied customers, not that every customer must be satisfied at all hazards, but within the limit of the best interests of his institution. His stockholders, the taxpayers, must also be satisfied. They must see dividends in the shape of benefits to the community commensurate with their interests."

Of course, the superintendent should know enough about teaching and educational theory and practice to determine when the supervisors are securing results. In a city of any size it is not the business of the superintendent to supervise directly. For one reason it is a physical impossibility.

Local Influence

A superintendent should have the ability to arouse interest among the people of the city in the needs of the schools. Some boards of education will not consider a man for the superintendency unless he can prove that he has interested the people in their schools. A few years ago when a board of education was looking for a superintendent, a committee of the board visited a city to make inquiries about the superintendent of schools. The committee interviewed a number of business and professional men and discovered that only a few were acquainted with the superintendent and that several did not know his name, yet he had been superintendent of the schools of this small city for several years. The committee was in search of a man who possessed among other qualifications the ability to make himself felt and made no further inquiries. The superintendent was scholarly, he was of excellent character, he was a good supervisor of instruction, but he had not during his term aroused any interest among the people in the schools of this little city.

If the board of education does not intend for the superintendent to be the executive officer of the board and the educational leader of the city, but intends for him to be a mere figurehead, the qualifications just listed are not necessary. Possibly the board, in order to impress the people, will employ a man with a string of degrees rather than one who can get things done. Boards of education that expect to do everything themselves should not employ executives. It is not fair to a good executive to elect him.

Having decided what qualifications a superintendent should possess, the next step is to find him. There are usually local men to be considered, as the assistant superintendents, and elementary and high school principals. All these should be given careful consideration to see whether they possess the qualifications desired. In a way, local men are handicapped from the fact that the board is familiar with all their shortcomings, while the board hears chiefly of the good qualities of the men from the outside. Their weak points are usually discovered only upon minute inquiry.

Local Candidates

In many of the smaller cities the high school principal is promoted to the superintendency. He may or may not make a good superintendent. It depends upon whether he has made a study of city school problems of administration. If he has been interested only in the routine management of the high school and has no knowledge of elementary school problems, he may not make an efficient superintendent. A popular elementary school principal may be elected, but should not be because he is popular but because he has the qualifications that the board of education has decided its superintendent should possess.

The best plan is for the board quietly to search for the man. If it is advertised that a superintendent is to be elected, applications will be received from every section of the country. Some of these might make excellent superintendents, but the board should take no chances. The records of some of the more promising might be looked up. Some boards have adopted the plan of going over all the applications and eliminating all but five or six. The board should then look up in the minutest detail the record of each. If a committee visits a city to inquire about its school superintendent, the members of the committee should see other than the close friends of the superintendent. The board owes him and his friends nothing, and it is only fair to the board that those not in accord with the superintendent's policies be interviewed, and it may work to the advantage of the superintendent, for often a committee can discover the good points of a superintendent by making inquiries of his enemies.

A committee that was looking for a superintendent discovered that a superintendent that the board was considering had some enemies. These were interviewed. One said, "The sooner you take our superintendent the better." The committee discovered that the superintendent refused to nominate the man's daughter for a position in the schools. Another said that the tax rate had been increased because some "fads," as he characterized manual and fine arts, had been introduced. One of the committee speaking of this incident said that that superintendent's enemies gave him a better recommendation than did his friends. Of course, this would not always be the case, but this is not a matter for the board looking for a superintendent to consider.

Investigation is Essential

When Dr. N. C. Schaeffer was state superintendent of public instruction of Pennsylvania he said regarding the necessity of looking into the past and present of an applicant for a superintendency: "Where a man has made no enemies it is proof that he has never taken a stand or waged a fight on any of the great moral questions of the day. And then, after consulting the man's friends and enemies, it behooves the inquirer to learn what he can from those who occupy a position of indifference. In that way you have the best criterion you can get to test the qualities of a candidate for the position of superintendent. Some mistakes have been made in the selection of superintendents. If the directors had asked not merely the friends but also the enemies and then submitted the inquiry to those taking no side for or against the candidate, they would have avoided some of the blunders we find today."

Unless a board of education looks up the records of some of the more promising men, it will not know what to do when it meets to elect a superintendent. A board in a city of about 10,000 population acting on the plan of letting applicants seek the position had on the day of the election sixty applicants from which to choose. Many of these had interviewed the members of the board and had had letters written urging their election. The board had made no investigation of any of the applicants, so until a few hours before the election it scarcely knew what to do, but a wily politician knowing the difficulty that the board would have in

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Measuring the Budgetary Procedure of a School System[1]

Prof. Harold F. Clark, Indiana University.

I

Our problem may be somewhat beyond the orthodox limits of Educational Measurements. Certainly the attempt to apply measurement to the field of the financial control of education meets with unusual difficulty.

This group as a group is probably thoroughly convinced of the possibility of measurements in educational achievement and mental traits. It may tax your credulity to think of applying a similar technique to the problems of government. You see, the problem for education and government is one and the same, in this attempt to apply measurements to the field of financial organization and control.

Nature of the Problem

Some thinkers in the general field of government have not despaired of the possibility of measurement. Mr. Buck of the New York Bureau of Municipal Research, writing in the *National Municipal Review* for March, 1924, says: "Although many may not be willing to agree that the results of government are measurable, we are constantly evaluating governmental services or trying to evaluate them in some way or other. Measurements of work and measurements of results among other things may be mentioned. It may sound like a dream, but we must devise methods by which we can measure the results of government so the information will be accurate and conclusive."

Mr. Buck, to illustrate the possibility to his popular and probably somewhat hostile audience, gives some of the old illustrations with which you all are familiar. He reminds us that it was not so many hundred years ago that we had no accurate way of measuring temperature. If the doctor wanted to know if the patient had a fever, he felt him and said: "I think he has. He seems to have." We are in the same condition in the financial administration of education today. We believe our way of preparing the budget or not preparing it is better than some other. It seems to us and we think just as the witch-doctor of old thought about the impossibility of measuring temperature. Some of us will say that it must always be so in the field of financial control of education.

For our critical friends who say it cannot be done, we will quote a statement of one of the greatest authorities in the field of measurement: "Indeed a case could well be made out for the thesis that the theoretical objections sometimes brought against social and political measurements really hold in the last resort against all measurement and prove too much; and that the real difference between such measurement and physical measurement is simply that social and political phenomena, being practically more difficult to handle, force on our notice the theory of knowledge difficulties inherent in all measurement, whereas in physical measurement familiarity has bred contempt."

If some of you are skeptical of the possibility of scientific measurement in this field, what will the critics of measurements and the skeptics of quantitative technique in general think? Some of our humorously inclined friends might even say we are willing to admit that "whatever exists, exists in some quantity and whatever exists in quantity can be measured," but we deny the existence of school budgets. I am afraid in all too many cases we would have to admit they are right.

Other settled-minded people might take the position Burgeson states in speaking of more general things: "Reason does not proceed in such matters as in geometry, where impersonal premises are given once and for all, and an impersonal conclusion must perforce be drawn." That really is the essential question—Can such matters as budgetary procedure be put on an impersonal basis and therefore made scientific, or must they always remain matters of personal opinion?

Some of you will think of the superintendent that followed a procedure that would score about zero on our score card, and yet was remarkably successful in his financial affairs. To the minds of some that is the effective answer showing that measurement breaks down when applied to the personal element because it may violate some of the rules and yet succeed. The case is just the other way; the attempt of science is to eliminate the personal factor and make the judgment perfectly objective. There may be a man who can guess the temperature more accurately than the thermometer will register it, but we cannot build procedure around such chances. Measurement attempts to eliminate personal factors as to what are the facts, then to allow all the freedom in the world as to what to do with them, until science advances further and makes the procedure part of the facts.

The following work grew out of the attempt to find some kind of procedure by which the man out in the field could check over his budget and improve it. That is the test we want to apply; if it succeeds in that it will fulfill its purpose regardless of the statistical beauty of the work. The attempt, then, was to find a process that would enable us to check budgetary procedure more or less objectively, with as little personal opinion as possible. A survey of the possible methods to use soon convinced us that the score card was the best initial point of attack.

II

The Score Card

Taking up the score card itself there are four questions to be answered:

1. What are the elements composing the score card?
2. How were the elements obtained?
3. How was the value of each determined?
4. How is the score card used?

The first question, what are the elements composing the score card, is most effectively answered by turning to the score card itself.

You will notice the elements have been considered under five large headings: preparation, voting, execution, control, and special. We will take just a moment to glance over the items.

(The score card follows)

TENTATIVE SCORE CARD BUDGET OF A SCHOOL SYSTEM

(Both procedure and results)

Score on the basis of 100 points.

I. Preparation

- (6) 1. Who prepares estimates?
- (7) 2. How are the estimates of expenditure prepared?
- (6) 3. How are the estimates of revenue prepared?
- (5) 4. Universality—are all the items in the budget?
- (4) 5. Specialization—in how small divisions is the budget prepared?
- (4) 6. When—how near to date when budget begins?
- (5) 7. Time consumed in preparing. Are standard forms used? Is a budget book kept?
- (5) 8. Sincerity—are estimates padded or amounts given as needed?

II. Voting

- (4) 9. Provision for public discussion, hearings, before voted.
- (4) 10. How much do voting authorities change budget. Per cent?

III. Execution

- (6) 11. Who executes, carries out provisions of the budget?
- (6) 12. Provision made for checking expenditures with budget estimates through the year, preferably monthly.
- (3) 13. What are the provisions for handling deficiencies? (Transfers, additional appropriations, or appropriations for contingencies.)
- (4) 14. Amount of borrowing necessary. (Per cent of budget.)
- (5) 15. Provisions for seeing that departments do not overspend.

IV. Control

- (5) 16. How completely is the fiscal period closed? Method (How are bills handled that are presented after the close of the fiscal year).
- (4) 17. Per cent of surplus or deficit.
- (5) 18. What provision for audit?

V. Special

- (8) 19. What is the cost of the budget, what savings does it make, what waste prevent.
- (4) 20. Ease with which publicity material be prepared from budget forms.

Turning to our second question—How were the elements obtained?—most of the customary schemes were brought into use to determine the elements to be used.

a. Scores of books and articles were analyzed to see what they suggested as being vital to good budgetary procedure.

b. Opinions were obtained from leaders in the field and students of the problem.

c. Job-analysis was carried through to find the elements that make a good budget.

d. Finally the items were checked against budgets that were actually working, with the constant thought in mind: what are the factors that caused them to succeed?

Special attention was paid to the factors that can be transferred to other situations; in other words, the impersonal factors. We are not decrying the personal element or belittling the study of these personal elements. We are simply not interested in the personal elements that can violate all the principles and succeed. We admit they are in this field as in all others. We are interested at this time in only those elements that can be applied to typical situations.

The great need of the immediate future is to take these impersonal elements and try them out by an actual laboratory and experimental method. Picking the right elements with more certainty depends upon testing out experimentally the different plans with only one of the elements varying. To the extent that these methods have been tried out with all conditions except one constant, we have had a laboratory and experimental method. It is needless to say that with so many factors at work it is difficult to tell which is the effective factor. Refinement of technique to determine this more accurately is what is needed. There are no insuperable practical or theoretical difficulties in determining such matters on an experimental basis. With every schoolman in the country working on one or two problems each year we would have a laboratory sufficient to solve this and many of our other problems.

Passing to the third of our questions—How was the value of each item determined? At present no other way seems to be feasible to determine the value of the elements of the score card but by judgment and opinion. Opinions of competent judges is the basis of the values assigned in this score card. Ultimately, by a long process of trying out with one factor different and others similar, differences in value of the different elements could be tested experimentally by the relative change in efficiency produced by each element.

Considering the fourth question—How is the score card used? As suggested before, the reason for constructing any such devices as we are

[1]For the full discussion of this topic see the Proceedings of the 11th Annual Conference on Educational Measurements, Indiana University, 1924.

considering this morning is to be of use out in our school systems. It may be at first that such a score card will perform its best service as a checking device. It may be used to call the attention of the superintendent to the best practice. It is the combined and condensed judgment of the best authorities. For use as a check list to call the superintendent's attention to the best practice and get him to justify his own if it is different, the card should be of immediate value.

Our main consideration here is not with the use but with more technical matters. Just a word concerning the use before we pass on. It will doubtless be said that the difficulty of obtaining some of the information will make the score card so difficult to use that it will not justify the effort. The very effectual answer is that there is something wrong with the record system in that case and it would be wise to check over it. All the facts that are needed to use the score card a superintendent should know or have readily available. The score card should prove of some value for survey purposes in comparing one system with another.

However unreliable this instrument may be, certainly it is more reliable than to compare one system with another on the basis of judgment without any checking devices. The question to ask is, Is the procedure better than what it will replace?

III

Points of Criticism

Having touched upon the possibility of such a score card and upon the card itself, we will take up some of the more technical points of criticism.

The first point suggested by a considerable number of friendly critics is that we are attempting to measure two things that are not measurable at the same time. They tell us that both procedure and results cannot be measured in the same scale, that the material to be measured is not homogeneous, therefore there can be no unit by which to measure it.

It is immediately admitted that the ideal course would be to measure the procedure and the result separately. The author hopes ultimately to do this unless someone else does it more efficiently than he is able to do. For the present time the practical thing to do seems to be to cover the entire field. That is the reason such an item as No. 19, which considers results, is included. Some will say that results are the only things in which we are interested, that they are the only things of value, measure them and let all else go.

In building up judgment scales, score cards, and similar devices, we have been told to use competent judges. Does any one know what difference it would make in a specific situation if the judges were not competent? In other words, what would be the difference between expert and non-expert judgment? Taking the well known and valuable school building score card, would it have made any difference if the values had been assigned by non-expert judges?

Let us take the hypothetical case where the value assigned by two groups of judges, one supposed to be expert and the other non-expert, are the same. What are the possible explanations? It is possible that no one knows the value to be given to the different elements, in which case they would all be guesses and the socalled expert and non-expert would come out the same. On the other hand, it is possible that the values are so obvious that everyone knows the relative value and for that reason expert and non-expert would assign the same value. There is a third possibility, that judgment does not determine the value, but the value has been controlled by statistical arrangement making expert and non-expert the same.

Carrying the point a little further, for an illustration let us assume that we have one hundred expert and one hundred non-expert judges.

1. Will the final value given to the different points be the same in each case?

2. If the values are the same, has the process of arriving at the values been different?

3. Assuming further that the final values of the non-expert judgments are approximately the same, would it make the scale less valuable if it were based on the non-expert judgments?

These may seem nonsensical questions, but I hope you see the important point under them. Is the value determined by judgment or by mechanical arrangement and mathematical laws?

Taking up the last of our three questions first, "Would the scale be less valuable if based upon non-expert judgment even though the values were the same as would have been assigned by expert judges?" We are safe in saying it would, at least to many people.

The second question, "If the values are the same, has the process of arriving at these values been different?" We are safe in assuming again that the process has been different. Let us assume that our score card is made of twenty points that are exactly of equal weight. The expert judges will then assign five points to each and a sufficient number of non-expert judges would give an average of five points each from the laws of chance. The important question for us, Is some such principal determining the value assigned by even the expert judge?

To return to our first question, "Will the values given by the expert and non-expert judges be the same?" In the illustration given above, they will. The only way to know what would happen in an actual situation was to try it out with both expert and non-expert judges. That is what was done. We have a large number of judgments from recognized experts in budgetary procedure from the fields of business, government and education. The final value as obtained from the expert judges was compared with the judgment of one hundred freshman and sophomore college students. If the judgments of the college students were a pure chance affair and the number was sufficiently large, each of the twenty statements should have been given five points. The actual situation was slightly different from this, the average deviation being about one-half of one point from five. The second fifty judgments did nothing to decrease the size of this average deviation from that obtained from the first fifty. You see from this how improbable it is that this deviation from the chance value is the fault of having only one hundred judges. It is probable that even these non-expert judges are convinced that one or two of the points are more valuable than the others and one or two less valuable. The same elements tend to hold the high values and the same ones the low values, right through all the answers. It would tend to show there is some matter of judgment producing it.

The further question, "Would each element be given the value of five if we had judges who know even less of the subject than freshman and sophomore students?"[2]

The average deviation of expert judgments from the chance value is more than twice that of the next best informed group. This does not prove the experts are right, but at least the expert judges as a group were convinced that some points were much more valuable than others and so marked them. The answer to our question is that expert judgments do differ considerably from non-expert.

Introducing questions that have no value, or even negative value, is a good way to get light on some of the factors that are determining the value of questions. This affords a very good check on the ability of the judges.

Reference has been made to the place, mechanical arrangement or mathematical law may play in determining the value of the different elements. It is a point that has been largely overlooked in the past. To determine its influence in one way, the list of items was scored by a large number of judges in the form in which it has been presented here today, that is, in the five large divisions. Another set of judges were given the twenty statements not divided into the five large divisions. You noticed one of the divisions had two items under it, another had eight. There was a tendency on the part of some of the judges to make the divisions of approximately equal weight. Naturally this increased the weight given to the items in the divisions having only a few items.

Another good illustration of the effect of mechanical arrangement upon the score values can be obtained by combining or dividing questions. There is considerable evidence to show that breaking up one question into two or more tends to increase the weight to that original item. The evidence we have shows this to be true to the full extent with non-expert judges. It is only natural if we put in another item that it will obtain its proportional part of the total weight from the non-expert. This seems to decrease with the expertness of the judges and with sufficiently expert judges it would probably disappear entirely. This increase happens in a slight degree even with our most expert judges. The total evidence seems to show that mechanical arrangement and mathematical law control the value of items to a very considerable extent.

The moral would seem to be to pick or arrange the elements going into your score card with great care. You can largely ignore your judges, although the more expert they are, the better instrument you will have. This points out to us one of the advantages, as well as one of the defects, of a score card made up of more or less arbitrarily selected elements. We need more careful experimentation to determine the exact influence of these different factors in a final score.

I would like to suggest one other matter to those interested in the more technical phases of the subject. There seems to be no difference in final value from ranking the elements in order, then getting judgment units, and assigning the percentage values directly. This may not be a fair test, but it raises the question how much difference in final ranking there would have been in handwriting or composition scales by the direct percentage method of scoring.

This score card has not been offered as a final solution of the problem of measuring the budgetary administration and control of a school system. On the other hand, it is distinctly tentative and our most sanguine hopes are that it may be a checking device for those who want to go over their procedure and see where they can improve it; to have possibly a limited value in comparing one system with another, and finally to stimulate the bringing forth of better instruments.

IV

Summary

1. There are unusual difficulties in attempting to apply measurement to the field we have been discussing, but it can and must be done.

2. As a beginning attempt, we have used a score card based upon expert judgment. Ultimately both the elements and their values must be determined by experimental and laboratory methods.

3. A beginning has been made as to some of the characteristics of expert judgments and their differences from non-expert. The mechanical arrangement and make-up of a score card may play a very important part in determining the value of the different items even for expert judges. We have shown what some of these factors are and their influence, but we need much more careful determination of their value.

[2]The discussion will be found in the Measurements Conference Report.

Comparison of Incomes, Illiteracy, Length of School Session, and Years of School Life, by States

Frank M. Phillips, Ph.D., Chief of the Division of Statistics, Bureau of Education.

The accompanying table is made in an attempt to answer questions regarding the relationship between income and illiteracy, regarding educational rank of States, and also regarding length of school year and the amount of schooling individuals get in the various States. The data selected are for the most part as nearly the year 1920 as possible, because during that year the United States Bureau of the Census gathered a great deal of material having to do with children of school age and the number attending school between September 1, 1919, and January 1, 1920. In order to use this material to its greatest advantage the data selected cover the years 1918, 1919, 1920, and 1921.

In column five there is an attempt to express a sort of ratio between the amount reported as income for government tax and the whole number of wage earners, many of whom do not file a return.

An attempt is made in column 12 to show the average number of years of school life in the various States. That is, the average number of years children between 5 and 20 years of age inclusive get the benefit of educational opportunities offered by the various States. In order to get the figures in column 12, it is necessary to make some assumptions and some minor adjustments. Those reported as attending school in 1920 by the United States Bureau of the Census are not distributed according to public and private schools, nor according to elementary, secondary and higher schools. It is assumed that the private schools of the various States have the same length of session and the same average attendance as have the public schools in these States. The number attending public elementary and secondary schools in the various States corresponds closely to the number attending some sort of school between the ages of 5 and 20 inclusive as reported by the Census Bureau. The number attending public schools in 1920 is 21,578,316, while the number in this specific age group attending some kind of school during the same year is 21,373,976. It is probable that these differences do not cause errors in the data used in column 12 of more than one, or at most, two per cent.

Column 13 represents the rank in illiteracy of individuals ten years of age and over in the various States of the United States. This material was gathered by the United States Bureau of Census in 1920. Illiteracy is defined by the Bureau of Census as inability to write any language regardless of ability to read, and should be understood as representing only those persons who have had no schooling whatever. Column 13 ranks the States so that the one with the least illiteracy is given first rank and the one with the greatest amount of illiteracy is given 49th place.

Column 14 represents the educational rank of States as worked out by Leonard P. Ayres for the Russell Sage Foundation in 1920, in which he used data for 1918. No responsibility is assumed by the Bureau of Education for the arrangement of States made by Mr. Ayres. According to the Ayres system the States are ranked on ten points by methods which are non-personal, and upon data which for the most part had been gathered by the Bureau of Education. These ten points are as follows: (1) Per cent of school population attending school daily; (2) average days attended by each child of school

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TABLE 1—INCOME, ILLITERACY, EDUCATIONAL RANK (AYRES), AND LENGTH OF SCHOOL LIFE, BY STATES.

						School Census 5-20 years of age, inclusive, 1920										
	Income 1919 (in thousands of dollars)	Per Capita Income	Total Personal Income, as reported on the Income Tax Blank, 1921	Population, 10 years of age and upward, engaged in gainful occupations, 1920	Average Income reported per wage earner Col. 4 ÷ Col. 5	Number	Number attending school	Per cent attending school	Number of days public schools were in session, 1920	Average number of days attended by each pupil enrolled, 1920	Average number of years school life on basis of a 180-day year	Rank in Illiteracy, 1920	Educational rank, Ayres, 1918	Rank in per capita income, 1919	Rank in Average income per wage earner, 1921	Rank in years of School Life, 1920
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Continental United States	$66,252,601	$ 626.73	$23,285,656,926	41,614,248	560	33,250,870	21,373,976	64.3	161.9	121.2	6.92	....	....	....	....	....
Alabama	810,226	345.05	130,267,672	908,216	143	905,257	522,758	57.7	123.1	79.4	4.05	46	46	49	47	49
Arizona	221,788	663.71	52,743,178	130,579	404	105,426	59,496	56.4	162.6	98.6	4.94	43	3	21	31	42
Arkansas	663,742	378.80	107,714,327	634,564	170	664,101	406,727	61.2	126.3	85.2	4.63	38	47	46	46	45
California	2,808,992	813.86	1,386,491,035	1,512,760	917	833,104	579,211	69.5	174.0	120.2	7.42	21	2	4	3	26
Colorado	600,483	639.07	211,330,618	366,457	577	278,042	193,482	69.6	167.9	114.4	6.89	20	14	22	15	31
Connecticut	990,388	717.35	414,468,606	589,905	703	388,719	261,523	67.3	183.5	144.1	6.84	33	11	12	8	32
Delaware	176,591	791.88	61,189,645	91,224	671	63,553	41,081	64.6	181.7	129.2	7.42	31	36	5	12	27
District of Columbia	386,929	884.26	283,653,079	236,027	1,202	101,880	64,475	63.3	178.0	143.8	8.08	15	5	1	1	12
Florida	406,477	419.71	149,966,221	385,312	389	326,593	194,845	59.7	133.1	98.0	5.26	39	38	41	33	39
Georgia	1,141,953	394.45	218,383,108	1,129,157	193	1,110,997	619,025	55.7	145.0	98.0	4.84	44	44	43	44	44
Idaho	260,665	603.58	57,879,375	153,459	377	143,254	102,926	71.8	172.7	126.9	8.08	4	18	23	35	13
Illinois	4,962,384	765.18	2,117,982,418	2,627,738	806	1,886,010	1,226,601	65.0	170.9	144.9	8.36	23	23	9	4	10
Indiana	1,702,776	581.07	461,206,184	1,117,032	413	861,375	563,523	65.4	155.8	125.8	7.31	12	17	28	20	28
Iowa	1,697,401	706.07	362,966,753	858,698	423	724,452	515,616	71.2	174.0	137.2	8.68	1	7	14	28	6
Kansas	1,065,339	602.14	254,341,038	624,391	407	557,851	389,497	69.8	164.0	124.8	7.74	5	26	24	30	19
Kentucky	946,610	391.70	227,041,868	851,122	267	835,509	519,093	62.1	123.0	78.7	4.35	37	42	44	41	46
Louisiana	771,414	429.48	236,351,178	681,233	347	665,112	352,964	53.0	148.9	107.7	5.07	49	43	39	36	41
Maine	448,106	583.46	141,386,924	309,858	456	217,683	151,397	69.5	169.2	142.4	8.78	22	33	27	23	4
Maryland	999,529	689.76	422,870,561	603,478	701	440,265	266,529	60.5	179.6	130.3	7.00	30	35	17	9	30
Massachusetts	3,034,020	787.58	1,375,770,451	1,728,318	796	1,055,088	721,326	68.4	179.4	149.6	9.08	27	9	8	5	1
Michigan	2,581,907	703.82	779,154,540	1,474,014	529	1,048,309	710,341	67.8	172.0	129.6	7.79	17	10	15	17	18
Minnesota	1,386,514	588.08	399,547,281	907,013	441	744,897	498,138	66.9	160.0	125.5	7.45	8	19	26	25	25
Mississippi	629,071	351.31	83,773,541	721,410	116	698,264	432,625	62.0	122.0	76.9	4.22	47	48	47	49	48
Missouri	1,822,428	535.37	579,815,359	1,317,160	440	1,037,332	688,499	66.4	162.8	128.6	7.58	18	32	30	27	23
Montana	281,130	512.18	94,269,148	214,183	440	160,955	113,419	70.5	166.4	120.7	7.55	13	1	35	26	24
Nebraska	909,558	701.62	216,737,478	457,081	474	414,822	292,747	70.6	164.0	122.3	7.66	2	22	16	22	20
Nevada	65,791	849.93	25,550,219	37,548	680	18,446	12,611	68.4	167.0	125.8	7.64	32	16	3	11	22
New Hampshire	264,530	597.06	92,368,057	192,827	479	120,666	80,127	66.4	174.0	144.3	8.51	25	28	25	20	9
New Jersey	2,392,104	757.98	996,081,098	1,310,653	760	919,320	603,143	65.6	189.0	151.3	8.81	28	4	10	6	3
New Mexico	147,107	408.23	32,912,162	122,031	270	128,765	82,167	63.8	165.0	120.5	6.83	45	29	42	40	33
New York	9,074,859	873.82	4,543,670,857	4,503,204	1,009	2,860,256	1,856,260	64.9	188.0	148.8	8.59	29	13	2	2	7
North Carolina	980,596	383.18	155,948,408	895,852	174	989,588	620,486	62.7	134.0	91.8	5.10	42	45	45	45	40
North Dakota	332,916	514.65	50,214,918	207,082	242	233,065	158,259	67.9	166.9	127.4	7.66	10	15	34	43	21
Ohio	3,967,713	685.44	1,216,176,240	2,301,516	528	1,614,777	1,095,577	67.8	165.0	130.7	7.87	16	12	18	18	16
Oklahoma	1,083,851	534.36	232,508,139	681,428	341	754,117	481,253	63.8	166.4	100.5	5.69	24	34	31	37	37
Oregon	556,622	710.53	182,312,758	322,283	566	217,103	152,275	70.1	152.0	137.5	8.56	3	20	13	16	8
Pennsylvania	5,958,018	683.26	2,243,389,454	3,426,359	655	2,675,461	1,721,773	64.4	176.8	139.0	7.95	26	21	20	14	15
Rhode Island	434,988	719.70	189,248,240	275,000	688	173,404	108,817	62.8	182.1	142.9	7.96	35	25	11	10	14
South Carolina	735,398	436.16	82,314,549	674,257	122	675,152	423,740	62.8	109.6	76.0	4.24	48	49	38	48	47
South Dakota	436,254	685.29	59,193,935	216,571	273	211,870	144,441	68.2	167.0	112.4	6.80	7	27	19	39	34
Tennessee	853,867	365.23	203,227,405	830,096	245	842,199	523,700	62.2	133.5	98.5	4.84	40	41	46	42	43
Texas	2,511,050	503.85	662,815,736	1,719,023	386	1,698,606	980,469	57.7	155.6	112.0	5.74	36	37	36	34	35
Utah	232,324	516.97	71,045,413	149,201	476	159,339	116,385	73.0	166.4	138.5	8.97	9	8	33	21	2
Vermont	186,479	529.13	54,847,581	138,484	396	100,842	67,746	67.2	162.0	131.6	7.85	19	30	32	32	17
Virginia	990,107	428.77	245,032,551	833,576	294	824,929	489,319	59.3	147.0	102.2	5.37	41	40	39	38	38
Washington	1,066,073	785.83	379,695,535	578,667	656	373,108	257,332	69.0	176.4	128.1	8.73	6	6	7	13	5
West Virginia	655,723	447.99	238,434,471	491,116	485	515,423	321,191	62.3	138.9	102.8	5.69	34	39	37	19	36
Wisconsin	1,466,513	557.17	441,771,578	995,549	444	819,364	551,205	67.3	175.3	138.9	8.30	14	31	29	24	11
Wyoming	153,297	788.55	59,596,036	81,536	731	56,139	38,106	67.9	152.0	117.4	7.08	11	24	6	7	29

Column 2—Distribution of Income by States. National Bureau of Economic Research, 1920, N. Y.

Column 4—Statistics of Income. Commissioner of Internal Revenue, 1921.

Column 5—Occupations. Bureau of the Census, 1920.

Columns 7, 8 and 9—Population. Bureau of the Census, 1920.

Columns 10 and 11—State School Systems, Bureau of Education, 1922.

Column 14—An Index number for State School Systems. Russell Sage Foundation, N. Y., 1920.

Lessons from Massachusetts School Finance

II —Local Policies

Fletcher Harper Swift, University of Minnesota.

Significant Local Policies

Among the most important lessons which may be learned from Massachusetts with respect to local support are those concerning taxation and bonding for school purposes, the universalizing of school burdens and educational opportunities. The entire territory of the state of Massachusetts is organized into 317 towns and 38 cities. There is no chance under the town system of Massachusetts for the children of any community to be without school opportunities. Every town and city is required to maintain an adequate number of elementary schools, properly housed and equipped, and every town of 500 families or more must maintain a high school. Not merely the establishment of schools, but the provision of school superintendents, school physicians, and many other officers and facilities are required of all towns and cities.

In some states dominated by the district system it is possible for communities to refrain from levying a local school tax and from maintaining a school. The Massachusetts law makes such a condition impossible. Not only does Massachusetts specify the school facilities which must be provided, but she makes compulsory the levying of a tax sufficient to finance these facilities. Certain states such as California, which formerly placed limits upon local taxation, have recently removed them. Massachusetts enjoys the distinction of having never placed any state limit upon the school tax rates which towns may levy. As the basis of taxation, budgets must be annually submitted to the proper authorities.

Bonds, Sinking Fund Policy

Among the most important problems in school finance are those concerned with the issuance and redemption of bonds. In one of the southern states studied by the writer, the state constitution fixes the limit of local taxation at twelve mills. In this state rural school districts have no power to issue bonds, and special districts possessing such power have no means of redeeming bonds or of providing moneys for building purposes except by setting aside the same from the proceeds of the twelve mill tax. California requires that, at the time bonds are issued, a tax shall be voted sufficient to pay the interest and the principal of the bonds as they become due.

Massachusetts belongs to that small group of states, in which are included also Ohio, New Jersey, and Wisconsin, which have passed laws designed to put an end to the policy of redeeming bonds through the establishment of sinking funds. The Massachusetts law provides in effect for a serial bond policy for all towns and cities in the state, except Boston. Under this law bonds must be issued in series, and provision must be made for the levying of a tax sufficient to pay the interest on such bonds, and redeem them as they become due. If a city, town, or district votes to issue bonds, notes or certificates of indebtedness, temporary loans may be made for a period of not longer than one year in anticipation of the proceeds of the bond sales.

Other sources of local school revenue include appropriations, permanent local funds, tuition fees of non-residents, gifts, fines, and dog taxes. None of these are of sufficient importance to call for treatment in an account as brief as the present. However, the unique situation with respect to local permanent school funds seems to justify a few words, at least, regarding them.

Permanent Local Funds

The policy of establishing permanent town school funds, or endowments by private bequests, or by action of the town meeting was begun in colonial days. As the results of the antiquity of this policy, a considerable number of towns possess such endowments. The most recent record I have been able to find is that contained in the report of the State Board of Education for the years 1905-06. This report indicates that of the total number of towns in the state, 97 reported local public school endowments. These local endowments varied in value all the way from an endowment fund of $100 owned by Mount Washington in Berkshire County, to an endowment fund of $275,000 belonging to Winchendon in Worcester County. Towards the total expenditure in public schools for 1906, these permanent local funds contributed approximately three-tenths of one per cent.

The following table shows in summary form the condition of these funds in the year 1905-6:

Massachusetts Permanent Town Common School Funds 1905-6

COUNTY	Number of Cities and Towns	Number Reporting Permanent Local Common School Funds	Aggregate Value of All Such Funds for County	Variation in Limits of Funds Within County		Aggregate Income of All Local Common School Funds within County
	Total			Largest	Smallest	
Barnstable	15	4	$36,233	$1,500	$1,000	$1,804
Berkshire	32	7	5,252	1,297	100	305
Bristol	20	6	218,976	100,000	7,500	14,026
Dukes	7	0	.....	.....	.....	.....
Essex	34	11	206,466	77,005	1,469	8,204
Franklin	26	8	37,513	15,973	200	1,473
Hampden	23	8	38,314	15,618	222	1,930
Hampshire	23	5	25,000	15,000	500	1,042
Middlesex	54	15	115,636	38,521	500	4,894
Nantucket	1	0	.....	.....	.....	.....
Norfolk	29	10	45,654	17,286	500	2,243
Plymouth	27	6	33,623	9,858	365	1,473
Suffolk (Boston)	4	1	127,975	127,975	.....	4,885
Worcester	59	16	346,451	275,000	941	.....
Total	354	97	$1,237,096	.....	.....	$53,228

Results of the Present System

Not only have expenditures for public schools in Massachusetts risen with great rapidity, but the increase in school costs has grown much faster than the increase in public wealth. During the decade 1912 to 1922, Massachusetts' expenditure per pupil increased 105 per cent; whereas, the state's total valuation per pupil increased only 8 per cent. In 1890 there were approximately 274,000 children in average daily attendance upon public schools in Massachusetts; in 1920 approximately 520,000. In 1911 Massachusetts' total expenditure per child amounted to $50 per year; in 1921 to more than $96. These facts are shown accordingly in the following figure:

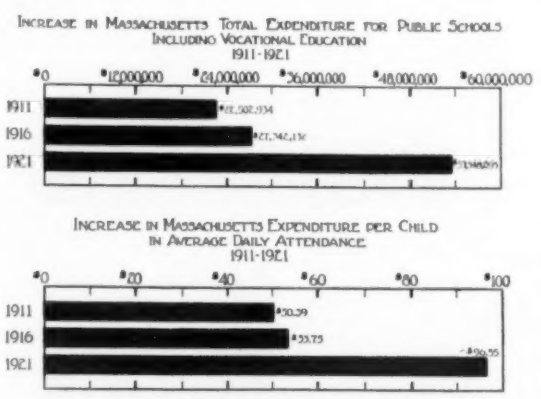


FIGURE I.

A comparison of the policies of Massachusetts with those of other states can scarcely fail to lead to the conclusion that up to the present time few states have endeavored more intelligently and more sincerely to provide equal educaitonal opportunities for all, and that few have understood so thoroughly that equality of educational opportunity must exist qualitatively as well as quantitatively.

Massachusetts' effort to equalize educational opportunities qualitatively is shown by her insistence upon the maintenance of minimum standards in a wide range of aspects of school procedure, especially two: (1) Her policy of encouraging small towns to provide for special supervision through the formation of superintendency union; (2) her policy of determining in part upon the basis of the qualifications of the school officers employed, the quotas to be granted from the state general school fund. Her all inclusive requirement that in order to receive state aid, cities and towns must have complied with all laws relating to public schools is designed to guarantee as completely as possible the equalization of educational facilities and opportunities. The question now arises, To what extent are these aims realized?

There is probably no better index of the character of the educational opportunity being provided for the children of any community, than the type of teacher employed. The saying "as is the teacher, so is the school," is as true as it is old. Admitting certain exceptions, we may nevertheless say that, in general, the training and efficiency of the teacher will be directly proportional to the salary paid. In 1921, the average salaries of all teachers in Massachusetts varied from $933 per year to $1,642. The average salary of women teaching in elementary schools varied from $648 to $1,084. In this same year, Massachusetts passed a law raising the minimum wage of teachers from $500 to $750. This law undoubtedly aimed to improve conditions in the smaller and poorer towns. Yet, whereas, the expenditure per year for teachers' salaries increased from 1920 to 1922, 81 per cent in cities and from 71 to 65 per cent in the larger towns, the increase in the smaller and poorer towns was only 47 per cent.

Inequalities in Effort and Aid

The Massachusetts system of school finance makes it impossible for any territory within the state to escape making an appreciable contribution to the support of public schools. Such a system aims to make every community bear its just burden of school costs. Nevertheless in 1922 local school taxes in Massachusetts varied all the way from one to sixteen mills. A further study of the situation would show that, generally speaking, the greater the wealth the less is the effort put forth by the town.

In a preceding article attention was called to the superiority of the Massachusetts methods of distributing state aid over those employed by the majority of our states. In the same article was noted the unsoundness of distributing the major portion of the general school fund to all towns of the state, and of limiting the income of the Massachusetts school fund to towns on the basis of total valuation.

Figure II which follows, presents a graphic comparison between the richest and poorest in each of the four official groups of Massachusetts towns. A study of this figure will show that in every case it is the poorest city or town which levies the highest tax.

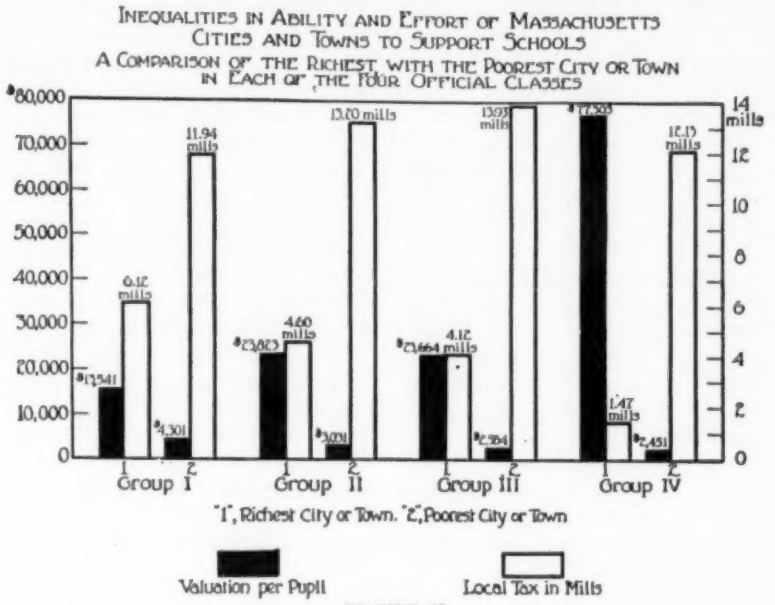


FIGURE II.

Surveying Figure II we discover that the poorest town in Group I levies approximately twelve mills; whereas, the richest city in this group, Boston, with a valuation of more than three times as great, levies a tax of approximately six mills. In Group II we discover that the richest town, which has a valuation more than seven times as great as the poorest, levies only a little more than one-third the tax. Yet this town receives from the state $8.46 per pupil; whereas, the richest town receives $8.49 per pupil.

Figure III presents a graphic comparison of the valuation and tax rates of seven Massachusetts towns.

The towns in the above figure vary in valuation from approximately $24,000 to approximately $3,000 per pupil, and the tax rates from 4.6 mills to 13.2 mills. A comparison of this figure will show that taking the group as a whole, with the exception of Hudson and Orange as ability to provide for revenue decreases, taxes increase.

In Figure IV, which follows, are grouped the 355 cities and towns of Massachusetts on the basis of their valuation per pupil. Opposite the bar representing the typical valuation of the cities and towns included in the group is indicated the per cent of the total number of cities and towns included in the group.

From figure IV we see that more than 28 per cent of the towns of Massachusetts have a valuation per child of less than $5,000; whereas, four per cent have a valuation of more than $15,000. It should be added that the valuations of the towns included in this latter group extend from $15,000 to $77,000 per pupil.

The facts presented by Figure IV should be sufficient to convince the most ardent advocate of local support that equalization of school revenues and consequently of educational opportunities can never be secured in Massachusetts as long as units so unequal in wealth are depended upon to furnish the major portion of school support.

In studies of a number of western and southern states, the writer has advised the abolishing of the district system and the establishment of the county as the local unit of organization and support. It might seem at first thought that a consistent adherence to principles would necessitate recommending in the case of Massachusetts the abolition of towns as local units and the establishment in their place of counties. But the states for which the county unit has been recommended present a situation entirely different from that existing in Massachusetts. They contain thousands of school districts; whereas, the total number of towns and cities in Massachusetts as a recognized and functioning civil unit as in the western and southern states just referred to. In addition to this, it should be noted that Massachusetts, through her town system, has attained and is maintaining successfully, standards so satisfactory and so far in advance of the great majority of our states that a careful student of the situation would hesitate to recommend any radical reorganization which might threaten a system that has attained such excellent results at many points. Moreover, under the town system, Massachusetts has shown herself both willing and able to introduce radical reforms in organization and in support, when convinced of their soundness. More than this, a county system of school support would still leave the problem of school finance very largely unsolved, owing to the wide variation among the counties themselves with respect to wealth.

Convincing proof of this last statement is set forth by Figure V, which follows, and which shows the inequalities of Massachusetts counties in ability to support schools as represented by their valuation per pupil in net average membership. As a basis for making this figure, Massachusetts' fourteen counties were arranged in six groups. In connection with the figure, is indicated the valuation per pupil of the richest and poorest county in each group, the number of counties included in the group, and the per cent of the total school membership living within the group.

From Figure V we see that the ability of Massachusetts' counties to provide school revenues varies all the way from approximately $15,000 per pupil in the richest county (Nantucket County) to approximately $6,000 per pupil in the poorest county (Franklin County). More than one-fifth of the pupils live in counties included in Group 1 where the valuation ranges from approximately $13,000 to approximately $15,000 per child. More than fifty per

(Continued on Page 104)

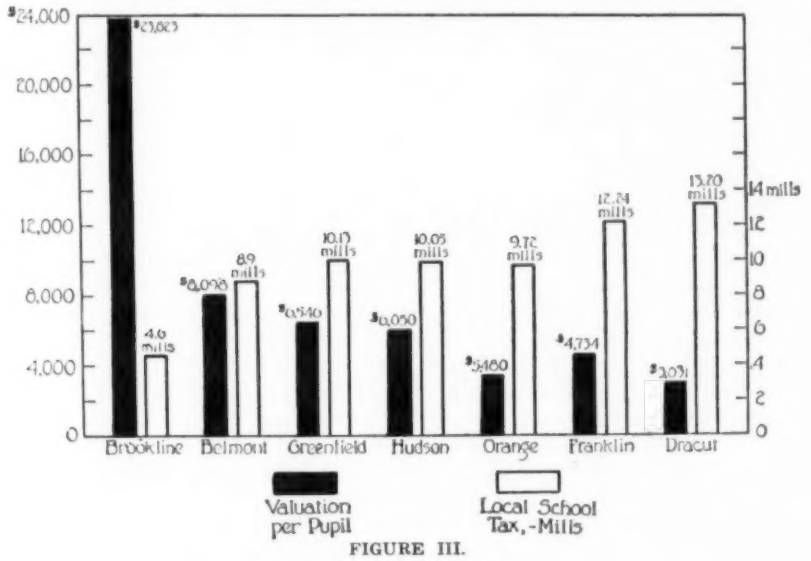


FIGURE III.

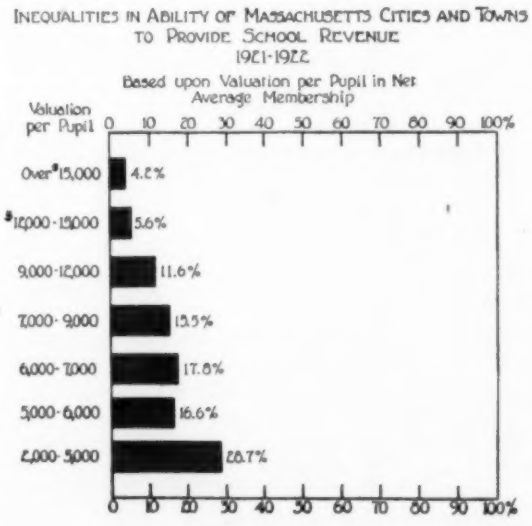


FIGURE IV.

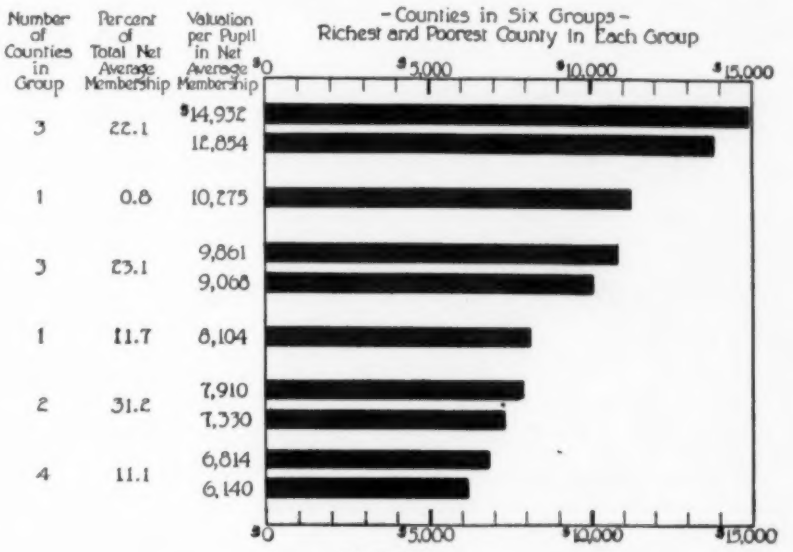


FIGURE V.

Some Data on the Cost of School Housing

J. B. Sears, Stanford University, California.

School surveys have furnished us with quantities of data on school expenditures. They have presented studies of costs both from the point of view of the total economic burden represented by school expenditures, and from the point of view of efficient use of the school money available. In these studies practically all current expenditures have been carefully examined, especially from this latter angle, and there is little doubt that efforts to prevent waste and to increase efficiency have been greatly stimulated. Evidences of weak administration, lack of supervision, and poor instruction have been interpreted in terms of cost, and by so doing, the surveys have furnished convincing arguments in favor of the movement to introduce scientific management into our schools.

There is one type of financial data covering one point in administrative efficiency which surveys thus far have not presented. At least not in such form or amounts as would furnish anything like standards. I refer to data which will show some measure of the service we receive from money spent on buildings. One high school plant costing a given sum will house 500 pupils, or a given number of pupil-hours of instruction, while a neighboring plant costing the same amount may house only 350 pupils. The questions which administrators should be able to answer are these:

First, with a given type of high school program, with a given type and quality of building, and with a given number of pupils, what should it cost per pupil, or per pupil-hour of instruction to house the children?

Second, with all these facts given, and with the population increasing at a given rate, how much beyond present needs should the district build?

Some Needed Classifications

These two problems in school finance are also problems in school administration and we are practically without information with which to solve them. Taking the first question, we do not have buildings classified into types as we should have. We at least should have buildings grouped on the basis of the type of curriculum offered, on the basis of longevity or rate of depreciation, on the basis of styles of architecture, and on the basis of fireproofness, and should know something about the relative costs of different types. Insurance companies have furnished us with a classification on the last basis, and architects have a suitable nomenclature for classification into architectural types, but we have no very satisfactory classifications on the basis of curricula or longevity, and very little knowledge of relative cost of different types.

Again, with practically all our city and most of our rural districts increasing in population we have no definite advice to offer on the question of how far beyond immediate needs we should build in communities of given types and sizes. Neither do we know how the addition of a few new courses or the addition of a given number of teachers to the staff will affect the housing problem.

When taxpayers invest in a new building they do not expect the investment to bear an exactly measurable rate of interest. They leave it to the schoolman to get the best return he can and they are inclined to take what he gets on faith. Yet, they do desire that he shall get the greatest possible service out of the building. When we provide classrooms and seats for 500 pupils and the seats are occupied by only 400 pupils, there is a serious waste. If the building cost $500,000, then $100,000 of it is very badly invested. Had the taxpayers kept the $100,000 it would have earned some $6,000 interest instead of lying idle.

We know in reason that it would not be possible to administer any high school program so that every particle of building space would be used up to its limit. The question upon which the following data bear is, Up to what limit is it used? If these data were for a dozen schools instead of one, they would be of more value. They are offered here, however, not as standards, but merely as a point of departure for the study of these problems in cost. It has been said often enough that the internal arrangement of a school building must be dictated by the character of the curriculum to be offered. Just what is the nature of the adjustment we are now making with buildings and curricula as they are? Are we using one hundred per cent or sixty per cent or forty per cent of the entire building space provided?

A Specific Study

This question was dealt with in a recent high school survey and it seemed worth while to make some of the results more generally available than they are likely to be in an official survey report.[1] The Phoenix Union High School has an enrollment of sligthly more than two thousand pupils and a staff of 95 teachers. The course of study is not widely different from that of the typical general high school except that it includes a junior college. It offers seven separate courses, including commercial, home economics, engineering preparatory, agricultural preparatory, science, general high school, and college preparatory. The plant consists of seven large and mostly modern buildings, and five temporary cottages. The buildings are close together, the courses of the junior college and high school are arranged as a six-year program, some members of the staff teach both high school and junior college classes, and pupils go freely from building to building for different studies. There is a science building, a mechanical arts building, a domestic science building, a gymnasium, and a liberal arts building which suggest some specialization in the matter of adjusting the building to curriculum needs. As compared with large high schools generally the staff is large rather than small.

What the Buildings Provide

These buildings provide in all 67 classrooms and four large study halls in which the study and recitations of a total of 331 classes is carried on. The classes range in size from 3 to 67 pupils. Table 1 shows for each department the size of the smallest, the largest, the median, and the upper and lower quartile classes. The problem was how to assign these 331 classes of the varied sizes suggested by this table to the 67 classrooms so that each room would be occupied by a class of just the appropriate size during each of the eight work hours of each day of the week, and so that each class would be in a room with suitable light and working equipment. Then, too, a previous problem was, how many pupils should be seated in each of the rooms? Lecture rooms, recitation rooms, laboratories, studios, all must be provided with seats or tables or desks so that there is proper room for each seat or other work unit. Problems of hygiene and problems of class management are involved.

TABLE I.—Size of Classes. (Rough figure only)

Department	Smallest	Lower Quartile	Median	Upper Quartile	Largest
English	very few cases		8		
Foreign Language	9	20	22	25	28
History	6	18	21	25	27
Mathematics	7	21	25	26	28
Science	8	18	23	25	30
Commercial	5	21	23	24	28
Industrial Arts	3	15	24	30	67
Fine Arts	5	14	19	23	29
Domestic Science	very few cases		29		
Agriculture	12	14	18	20	22
All High School Classes	3	18	23	25	67
Junior College	5	13	24	32	47

Without raising here the question of how these rooms should be seated, obviously a question of first importance, Table 2 shows how they actually are seated.[2] From this table it will be seen that the rooms contain all the way from 10 to 69 sittings but that fifty per cent of them contain from 28 to 30. In space the range is from a total of 304 to 4,220 square feet per room or from 11 to 240 square feet per sitting. These two columns show that size of room and area per sitting are both somewhat more varied than are the numbers of sittings per room. In fact 27 of the 67 classrooms each contain 28 sittings. Only 7 have less than 25 and only 4 more than 35 sittings. It appears that since classes of 28 pupils were very numerous, 28 seats had to be provided regardless of how large the room might be. The variation in size of classes is from 3 to 67, but it is noticeable that the two quartile cases are not very far from the median.

Each column in this table is independent of the others. It does not mean that the room with 10 sittings is the one with 304 square feet of space, 11 square feet per sitting, and used for a class of three pupils. That, of course, would be the most economical arrangement if it could be worked out, but any practical schoolman will readily think of reasons why it could not easily be worked out that way. The most typical room would be one with 28 sittings, with 630 square feet of space, with 22 square feet per sitting, and housing a class of 23 pupils.

The Right Size of Classrooms?

In passing, let us point out the questions which this table suggests for school administrators who desire the best educational procedure and the most economical use of building space. In the first place we will readily agree that no modern high school would hope or desire to have classes all the same size, and that, therefore, we cannot have rooms all the same in total floor space or in number of sittings. What we need is to get all our classes up to a maximum size for the subject and type of in-

TABLE II

Showing for Selected Cases: The Number of Sittings, the Square Feet of Floor Space (Total and Per Sitting), and the Size of the Class Which Actually Occupies the Room.

Case	No. of Sittings Per Room	Sq. ft. of Floor Space: Total for Room	Sq. ft. of Floor Space: Per Sitting	Size of Classes
Smallest Room	10	304	11	3
First Quartile	28	528	19	18
Median	28	630	22	23
Second Quartile	30	864	27	25
Largest Room	69	4220	240	67

[1] The survey referred to is that of the Phoenix Union High School, Phoenix, Arizona, made by E. E. Windes, United States Bureau of Education, director; J. B. Sears, Stanford University; and A. O. Neal, University of Arizona.

[2] In laboratories, the figures refer to work space and equipment for a pupil instead of a seat.

struction, making "efficient instruction," not "low cost," our criterion. What, then, is that maximum for English literature, for algebra, for mechanical drawing, for sewing, for beginning chemistry, for printing, for bookkeeping, for French? To this question we have no definite answer and, until we have, we cannot say how large our classrooms should be. Again, in a lecture room, how many square feet per sitting should be allowed? What area per unit of work space is desirable in a machine shop, in a physics laboratory, in a drawing or music room? For this question we have no answer, nor do we know the present practice.

To answer these questions we should have experimental evidence on what size of class is best, and careful study of the factors involved in determining the best area of floor space per sitting. The judgment of teachers on the size of class is valuable but for several reasons not an adequate basis. Tradition favors small classes and tradition unquestionably biases our judgment. Success in teaching is the important basis and success means pupil accomplishment with proper conservation of the teacher's energy and nothing short of experiment can approximate a right solution. Floor space per pupil in a room must be based on certain health factors and certain other factors that affect the success of instruction.

Returning, however, to our actual case, since we are likely to progress more rapidly when analysis is accompanied by a study of cases, let us ask what actual use does this high school make of these rooms? The number of seats in a room matters less than does the number of pupils but we should like to know how nearly 400 classes of various sizes can be fitted into 67 classrooms so that all the rooms will be used up to capacity all the time.

Relation of Class to Room

First we shall examine the relation of size of class to size of room. This may be seen quite clearly from Table 3. On the left of this table is shown the number of sittings in a room and at the top the number of pupils in the classes using the rooms. For instance, the table shows that there are 14 classes reciting in rooms each of which is seated for 19 children. Of these 14 classes 2 have 5 pupils each, 2 have 7 pupils each, 2 have 12 pupils each, 6 have 13, and 2 have 20. The 2 having 20 pupils each are too large for the rooms they use by one pupil each.

A glance at the table shows that there is no very close adjustment. Take the rooms containing 28 sittings: In the right-hand column it will be seen that there are 149 classes which recite in rooms each containing 28 sittings. Of these 149 classes, one has but 3 pupils, one has 7, one has 8, two have 10, three have 15, sixteen have 20, nineteen have 25, and five have even 28 pupils. That is, of the 149 classes, only five exactly fill the rooms they use.

Looking at the figures in the other way, it will be seen, by the bottom line, that there is only one class of 3 pupils, there are six classes of 5 pupils, six of 10, five of 15, 32 of 20, 35 of 25, five of 30, one of 34, and two of 38. Of the classes having 20 pupils each, two recite in rooms containing only 19 sittings, one in a room with 25 sittings, three in rooms with 26, one in a room with 27, sixteen in rooms with 28, two in rooms with 30, one in a room with 33, and one in a room with 37.

The Lack of Adjustment Illustrated

In order to get a clearer picture of this lack of adjustment between size of class and size of room, three lines have been drawn through the table. The classes on the right of the right-hand line are too large for their rooms. In all there are only 11 out of 377[3] classes that recite in rooms with too few seats. That is a negligible per cent, and it is clear that these cases do not represent serious overcrowding. If all the classes exactly filled their rooms then all the figures in the table would be close up to the left side of this line. Some of the figures, however, are very far away from this line.

The middle of the three diagonal lines is drawn so that figures lying on the line represent classes that fill exactly three-fourths of the seats in their rooms. Between the middle and right-hand lines are classes that fill their rooms from three-fourths to full capacity. In all there are 189¼ of the 377 classes in this group. In other words, about 50 per cent of the classes fill their rooms from three-fourths to full capacity.

The left-hand diagonal line marks the point at which the rooms are exactly half filled by the classes that use them. Between this line and the middle line are the classes that occupy from one-half to three-fourths of the seats available in their rooms. In all there are 126¾ or about one-third of the classes that fill their rooms from one-half to three-fourths of their capacities. This accounts for five-sixths of the classes; the other one-sixth or 52 classes occupy from a very small fraction up to one-half the seats available in their rooms.

[3]Classes occupying two class periods are counted here as two classes.

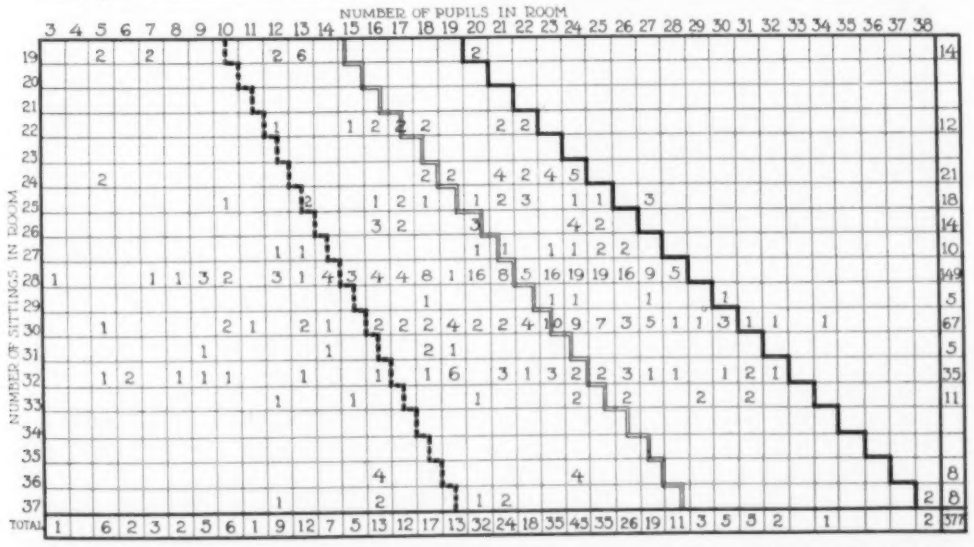
TABLE 4

Showing Relation of Size of Room in Number of Sittings to the Per Cent of Total Time the Room is in Use by Classes (Classrooms only, size of class not considered).

No. of Sittings	Per Cent of Total Time Rooms are in Use													Total Cases	
	36–40	41–45	46–50	51–55	56–60	61–65	66–70	71–75	76–80	81–85	86–90	91–95	96–100	No.	% of Time Used
10–	..	..	1	..	..	..	..	..	..	..	..	..	..	1	50
11–15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16–20	..	..	..	..	..	..	..	1	..	..	..	..	1	2	87
21–25	..	1	1	..	..	1	..	1	..	1	..	..	2	7	75
26–30	5	..	5	1	1	7	..	13	1	10	..	..	..	43	69
31–35	..	..	1	..	..	5	..	3	..	..	..	..	..	9	66
36–40	..	..	..	..	..	..	1	1	..	..	..	..	..	2	75
41–45	..	..	..	..	..	..	..	1	..	..	..	..	..	1	75
46 & over	..	..	..	..	..	..	..	..	..	..	..	..	1	1	100
Total	5	1	8	1	1	13	1	20	1	11	..	..	4	66	70

TABLE 3.

Showing the Relation of the Size of Classes to the Number of Sittings Provided in Recitation Rooms.



NOTE: This table omits 2 classes of 5 pupils each and 2 classes of 8 pupils each, all conducted in a room with 10 sittings. It also omits a class of 43 and a class of 45 pupils, both of which are conducted in a room provided with but 30 sittings; and 8 typing classes of from 52 to 67 pupils reciting in a room provided with 69 sittings. The median class here is 22.5, which differs slightly from median shown in Table 2. The median class recites in a room provided with 28 sittings. Further, this table counts double period groups as two class groups; hence its totals differ with totals in Table 2.

Some Administrative Queries

We may pause here to raise a few questions for the school administrator. First, as to the sizes of these 377 classes: How many are what they are because of: elective courses; because of required courses; because of the large number of separate courses and departments; because of the size of the staff and of the school population; and in how many cases was it possible to have classes exactly of the size desired? From the table one might suspect that it was no mere accident that there are so many classes of 28, 30, and 32 pupils. About what percentage of the classes in such a school can we make up in sizes to suit our wishes? The writer knows of no data that would offer information or suggestions on this point. Yet, if we knew this for a large number of cases we would have information that would help us to determine the size of classrooms when we are constructing or altering our school buildings.

Again, we may raise the question as to what percentage of the classes should fall within each of the four groups represented in this table. We cannot afford to have too many in the two extreme groups. The left-hand group means that we are getting from little or nothing up to fifty cents' worth of service for each one dollar invested in plant. Assuming that rooms are seated up to capacity, the right-hand group means crowded rooms and the inefficient instruction that is likely to result.[4] Can we have rich curricula, many courses and departments, large staff, wide freedom in elective courses, and avoid the loss suggested by this table? The loss comes from many angles. This paper is calling special attention to loss from failure to use the building space provided. In addition, however, small classes draw very heavily upon the salary budget. If a teacher teaches five instead of thirty pupils, then during that hour we lose five-sixths of her salary.

Another Approach

Another point of approach to our question of economy in housing will appear in an examination of the use of each of the rooms during each work hour of the day or week. This high school has eight periods of 45 minutes each in a work day and as a rule each class recites five times each week. There are double periods for laboratory work and some other variations from the five daily 45 minute recitations per week plan, but as a rule a class occupies a certain room at a certain hour daily or for five class periods per week. If a room is occupied eight class periods per day for five days per week, or 40 class periods, it is considered as in use 100 per cent of the time regardless of the size of the class using it. If it is used 25 periods per week it would be used 50 per cent of the time.

Table 4 shows for 66 classrooms arranged in groups according to the number of sittings they contain just what per cent of the time they are

[4]The data in Table 2 show that space per seat varies greatly. Some of the rooms in this plant could hold more seats than they do without being crowded. We need some standards for space per seat.

in use. From this table we read that one room containing ten sittings was used between 46 and 50 per cent of the time. There was one room with between 16 and 20 sittings that was used between 71 and 75 per cent of the time, and another one of the same size used between 96 and 100 per cent of the time. On the right is shown the number of rooms in each group and the per cent of time the rooms are in use.

Taking the 66 rooms together, we would have 8 (periods per day) x 5 (days per week) x 66 (number of rooms) as the total time available. Of these possibilities 70 per cent are actually used. An interesting point in the table is the fact that 43 rooms containing from 26 to 30 sittings, or the number best suited to the largest number of classes, are in use but 69 per cent of the time while some of the rooms of unusual size are used a larger per cent of the time. However, the per cent of time used does not vary regularly with size of the room. It might seem that small and large rooms would be vacant more often than rooms of medium size, since large classes can be assigned to large rooms only, but these figures show no marked tendency of this kind.

we get, at the bottom of the table, a figure for the plant as a whole. From this table we read that from the one room that contains 10 sittings only 33 per cent of capacity is utilized. That means that of the 10 (seats) x 8 (periods per day) x 5 (days per week) or 400 pupil-recitation-periods possible only 133 are actually made use of.

The striking thing here, as in the measure based upon time alone (Table 4), is the wide variety in each of the groups of rooms and the lack of any tendency for increase or decrease in per cent of use to vary with size of room. The two columns at the right could not show such a relation very satisfactorily even if it existed because of the small number of rooms in most of the groups. When all the rooms are considered together we would have a total capacity of 66 x 8 x 5 or 2,640 pupil-recitation-periods and of these only 1,320 are actually made use of. The waste is scattered through rooms of all sizes. A little adding in the bottom line of the table shows that one-fourth of the rooms are used up to less than 40 per cent of their capacity, that one-half of all the rooms are used up to less than 55 per cent of their capacity,

TABLE 5

Showing for 66 Rooms Grouped on the Basis of Number of Sittings the Per Cent of Total Full Time Seating Capacity that is Used by Classes.

No. of Sittings	Per Cent of Total Time and Space Utilized														% Time & Space
	21–25	26–30	31–35	36–40	41–45	46–50	51–55	56–60	61–65	66–70	71–75	76–80	81–85	86–90	No. Used
10–	..	..	1	..	..	..	..	..	..	..	..	..	..	1	33
11–15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16–20	..	..	1	..	..	1	..	..	..	..	..	..	..	2	41
21–25	..	..	1	1	1	..	..	..	..	1	1	..	1	1	7	61
26–30	3	1	3	3	4	2	5	8	9	3	1	..	1	..	43	56
31–35	..	..	4	1	1	1	..	..	1	1	..	..	..	..	9	44
36–40	..	..	..	..	..	1	1	..	..	..	..	..	..	..	2	53
41–45	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	42
46 & over	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	85
Total	3	1	10	5	6	5	6	8	11	5	2	..	3	1	66	50

One or two questions suggest themselves here: First, in per cent of time used, what can we set down as a normal expectancy for each room in a school of this type? Must we on the average invest one dollar in building space and obtain but 70 per cent return on the investment? Second, what return should we expect on rooms of various sizes or, on rooms occupied by classes of various sizes? May we expect more service from large, medium, or small rooms? May we expect more service from the rooms that are used by large, by medium, by small, or by mixed classes? This one case does not settle the question but it suggests the value of such norms if we can establish them.

We are getting full return on our building investment only when every seat is occupied full time. A room with 20 sittings would care for 20 pupils, eight periods per day and five days per week. The full capacity of such a room when time and space are both considered would be 20 x 8 x 5 or 800 pupil-recitation periods per week. If the room is used for 10 pupils on three days and 20 pupils on two days we would have (10 x 8 x 3) + (20 x 8 x 2) or 560 pupil-recitation-periods of service from a room with a capacity of 800 pupil-recitation-periods.

The figures for this high school were assembled so as to show exactly what per cent of full capacity thus measured, is actually being utilized. To picture the situation let us note that this is a plant of seven large and five small buildings, with 2,339 sittings, in 71 class and study rooms; that 2,047 pupils are enrolled in 391 classes in 13 departments, each with a rich program of studies; and that classrooms range in size from 10 to 69 sittings and classes from 3 to 67 pupils. With all these facts operating as limitations or demands, to what extent may one hope to work out a time schedule that will get 100 per cent service out of each room in the plant?

Table 5 shows the facts as the school is now operating. It shows it first for the rooms grouped according to size or the number of sittings they contain, and then combines them so

and that in no room is more than 90 per cent of total capacity utilized.

Is a 50 Per Cent Return Adequate?

This provokes several questions. What causes the loss? Is the loss preventable? If the number of courses were reduced so that it would be an old-time academic curriculum, how much effect would that have? Does this suggest a partial explanation of the increased cost in high schools? Can the work schedule be revised so that some of this loss will be overcome? Possibly the arrangement of the rooms in our buildings is partly the cause. These are angles of approach for a study of this problem. Surely we ought to receive more than a 50 per cent return on our investment in buildings.[5]

E. E. OBERHOLTZER
Superintendent of Schools-Elect
Houston, Texas

Mr. Oberholtzer, who was elected on April 7th as head of the Houston city schools, has had 24 years' experience in school work. He began his career as a teacher in the rural schools of Indiana in 1896. He held various supervisory positions in the state, was superintendent at Evansville for three years, and at Clinton for one year. In 1913 he resigned to assume the superintendency at Tulsa, Okla., which he held for the past ten years. He was the originator of the Tulsa "unit system" and he developed to a high degree the "five-three-three" plan of junior high school organization. He holds degrees given by Lincoln University, Chicago University, and the University of Tulsa, and has completed special courses at Chicago University and at Columbia University. He is a member of the National Education Association and the National Council of Education. The election of Dr. Oberholtzer is for two years and carries with it a large advance in salary.

Data were arranged by buildings to see whether some buildings were used more than others. The classrooms were used in one building 87 per cent of the total time, but only up to 38 per cent of its total seating capacity. Two buildings were used as little as 50 per cent of the total time and up to 34 and 37 per cent of total capacity. The science building was used up to 57 per cent of total capacity and 73 per cent of total time.

We have raised the question as to whether the work schedule might overcome some of the loss which our figures reveal. The day consists of eight periods. The 71 class and study rooms were checked against each of the work periods and the following figures show what per cent of the rooms were in use (disregarding the question of how large a class was using it) during each of the eight periods. From this

Work Period:	I	II	III	IV	V	VI	VII	VIII
Per Cent of Rooms in Use:	54	76	86	79	80	80	67	30

summary it will be seen that during the first hour in the morning only 54 per cent of the rooms are in use. During the second hour 76 per cent and the third hour 86 per cent which is the heaviest load of the day. During the last two hours the figure falls again.

Theoretically there is no reason why classes should not be scheduled evenly through the eight periods. There are some practical reasons no doubt why the early and late hours are less popular. But, when we consider this showing from the standpoint of return on our investment in buildings, we are inclined to say that the legitimacy of these reasons ought to be ascertained.

With these facts for one high school before us we cannot say that the program is badly managed, or that it is well managed. What we can say is that there is only a very rough adjustment of size of class to size of room, that there are many rooms vacant during all hours and especially during early and late hours, that the area of floor space varies so widely that there seems to be no pretense at seating rooms according to a standard, and that, therefore, on the average the buildings are entirely vacant during 30 per cent of the time, and that on the average only 50 per cent of the housing facilities are actually in use.

Against these facts as presented in the above tables it should be possible for any high school principal to check his use of his housing facilities. By such studies we may be able in time to find out whether we can justify our present management. We may find out the influence of certain factors in producing misadjustments, and finally establish certain standards and working principles to be used in the administration of the work program. If these figures represent efficient use of building space, then in looking into the future our building programs should be figured on this basis and not on a 100 per cent basis as they too often are. We must build 100 rooms when our need is for 70 and we must provide 100 sittings when our need is for 50. This means the expenditure of $100 for each $50 worth of housing service needed.

[5]We should not overlook the fact that classrooms are used for purposes other than classwork. Committees of teachers; student organizations and student committees; teachers' meetings, and conferences with pupils suggest many uses outside of regular study and recitation. Much of this work is important, and in a careful study of cost of housing such service could not properly be ignored. Yet study and instruction are the main purposes and we ought to find out whether 50 per cent of total capacity is a normal expectancy of return in service of this kind.

Presidents of Boards of Education

Sketches of Men Who Lead in the Administration of the American Schools.

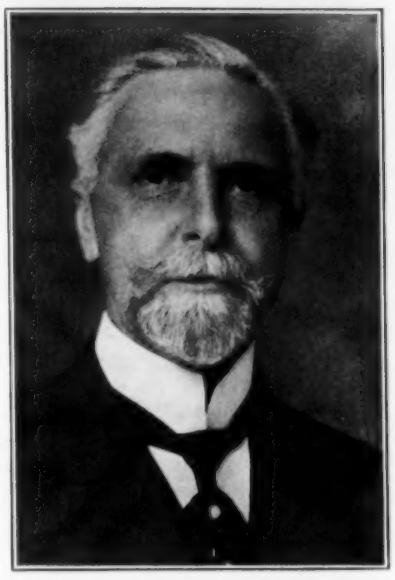
W. E. GREINER
President, Board of Education, Dallas, Texas

When a public servant, especially one who serves without remuneration and without purposes of gain or self-aggrandizement, combines the qualities of executive ability, rare good nature and old-fashioned common sense, the city or state or nation that he serves is rarely fortunate. Such has been the fortunate experience of the public schools of Dallas in the service of W. E. Greiner as president of the board of education. Ten years ago Mr. Greiner became a member of the board of education and after serving three years he was chosen president of the board of education and has served continuously in that capacity for seven years.

During the ten years of Mr. Greiner's service the schools of Dallas have increased from an attendance of fourteen thousand to an attendance of forty thousand. Such a rate of expansion has, of course, brought many problems of policy and administration before the board of education. During these ten years there have been erected three great modern high schools and a contract has just been let for the construction of another with capacity of two thousand pupils. During the same period of time, sixteen elementary schools with average capacity of eight hundred to a thousand children have been erected and sixteen other elementary schools have been revised and enlarged and practically doubled in size. Eleven elementary buildings have been added to the roster of schools either by annexation or the creation of new districts. All of the school buildings erected have been of the most permanent, modern and fireproof type of construction.

The growth of the schools in their service to childhood and service to the community has been equally as marked as their growth in numbers and housing facilities. The curriculum has been enriched both in the high schools and in the elementary schools. A work-play-study and platoon organization has been worked out in the elementary schools. Playground supervision and kindergarten facilities have been provided. A city-wide system of school lunch rooms under the auspices of the board of education have been worked out to a high degree of efficiency. Special schools for deaf children and children requiring unusual attention on account of unusual personal history or natal conditions have been established. School auditoriums have been provided in elementary schools as well as in the high schools, but most and best of all has been the fine cordial spirit

W. E. GREINER,
President Board of Education,
Dallas, Texas.



DR. BENJAMIN W. STILWELL,
President Board of Education,
Yonkers, N. Y.

of human sympathy and understanding that has prevailed among teachers, principals, supervisors and the board of education. During the ten years of his service the administration of the schools has been singularly free from friction, bickerings and misunderstandings. He is a man of large business experience and has unusual poise and tact in dealing with administrative problems.

Mr. Greiner is a native Texan and busy business man, being active head of the wholesale business of Greiner-Kelly Drug Company and of a trust company. He is also president of the Dallas Athletic Club, which has under construction a fifteen-story club building in the heart of the city. However, Mr. Greiner feels that the most interesting public service that he has ever given has been to the schools of the city of Dallas.

DR. BENJAMIN W. STILWELL
President, Board of Education, Yonkers, N. Y.

Dr. Stilwell was appointed to the board in May, 1919, for a period of five years by ex-Mayor William J. Wallin, at present a member of the State Board of Regents. One year later Dr. Stilwell was elected to the presidency of the board and is now completing his fourth year in that capacity.

In his person are the united qualifications for such a position which are seldom found in one personality. Not only is he a medical doctor, but also a counselor at law, a business executive and a man of affairs. His interests are many and varied, his sympathies wide and his vision clear and far-reaching. He has traveled in many lands, has managed estates, directed manufacturing and banking corporations and welfare organizations besides practicing law and medicine for a limited time.

Dr. Stilwell is therefore a citizen of wide influence in the community and one who has done much in his time to make Yonkers what it is today. At present he is vice-president of the Westchester Lighting Company, vice-president of the Yonkers Savings Bank, a member of the board of directors of the Westchester Trust Company, and also of the Hollywood Inn.

Equipped with such a training and experience, Dr. Stilwell has been an ideal school official. As president of the board of education he has taken a very active interest in maintaining a superior school system for the city of Yonkers and during his incumbency in office an extensive building program has been adopted and is well under way. The program contemplates the erection of five new high schools—two senior schools and three junior schools, each to accommodate 1,200 pupils, at a total cost of about five million dollars. Three of these schools are now in course of construction and plans for the fourth are being prepared by the school architect.

DR. VICTOR D. WASHBURN
President, Board of Education, Wilmington, Delaware

Dr. Washburn has been a moving force in educational progress in Wilmington, Delaware, for many years. He became a member of the board of public education in 1915. Since that time he has served continuously on the board except for the period from March, 1918, to June, 1919, when he was serving in the United States Army.

Prior to 1921, Wilmington had a large board of education, elected by wards. The board was organized in standing committees and all business, including the appointment of teachers, was transacted through these committees. The difficulties incident to large boards existed. As chairman of the finance committee, Dr. Washburn made a study of school finance and the needs of the Wilmington system. His service in this capacity marks a constructive period in the history of the board of education.

Many of the leading citizens believed that a smaller board could be made more effective. A citizens' committee was organized for the purpose of studying school conditions, and the best method of school organization.

Through the cooperation of this committee, with the board of education, a survey of the schools was made in 1920 by a commission appointed by the United States Commissioner of Education. Dr. Washburn was a member of the citizens' committee and took an active part in bringing about this survey. The two outstanding recommendations made by the survey commission were a building program, which would house the schools adequately, and a seven-member board, elected at large.

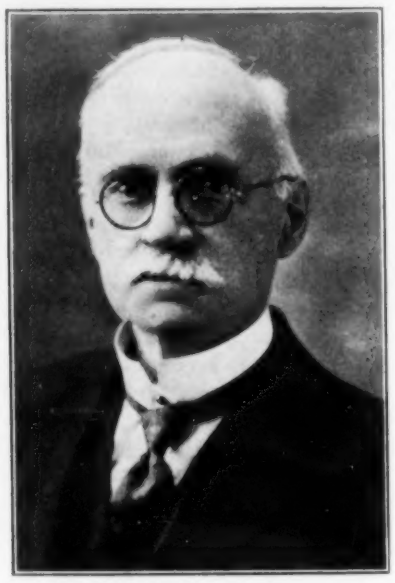
Dr. Washburn had a very definite part in crystallizing sentiment in favor of both these recommendations, and in June, 1921, a new board of seven members, of which he was one, was elected by a city-wide vote.

The new board at once began a study of the building needs of the city and the formulation of plans for an extensive building program. In this, as in all other progressive movements, Dr. Washburn has taken an active interest and has been particularly interested in the work-study-play plan of school organization.

DR. VICTOR D. WASHBURN,
President Board of Education,
Wilmington, Del.

He was elected president of the board in July, 1923. Since that time an extensive building program has been started.

Dr. Washburn is a physician of high standing. He is a student of education and is keenly alive to every educational movement. He is a man of vigorous and intense personality. He works rapidly and systematically and is, therefore, able to take an active part in many community affairs. He is a man of clear vision. He is a keen, logical thinker and a forceful speaker.



GEO. A. DAVIS,
President Board of Education,
Grand Rapids, Mich.

The Wilmington board is composed of members who stand for the most progressive policies in education, and they are doing everything possible to make the schools in all respects adequate. The board has met and overcome many difficulties. It is now facing the stupendous task of equipping the schools with new and modern housing facilities. A large program is ahead, and the members are together attacking the problems scientifically and with consideration for the best interests of the city. The board is a strong one. Dr. Washburn, as its executive head, enjoys the respect and confidence of all the members, and presides over their deliberations with dignity and force.

GEORGE A. DAVIS
President, Board of Education, Grand Rapids, Michigan

More than forty years ago, Mr. Davis came to Grand Rapids from Vermont, and immediately became interested in the furniture business, which is Grand Rapids' principal industry.

While in Vermont, Mr. Davis had received a good education and had valuable training in business so that his career in Grand Rapids has been successful from the first without serious setbacks at any time.

He became a member of the board of education in 1904. In 1905, a new charter was adopted by Grand Rapids in accordance with which the school board was reorganized. Formerly there were twelve wards in Grand Rapids and the board of education consisted of twenty-four members, two from each ward, together with the mayor, who was a member ex-officio. According to the new plan, the board of education consists of nine members elected at large for three years, the terms of three expiring each year. Mr. Davis had two years of valuable experience with the board of education under its old organization and the experience gained in those two years was of great value in successfully carrying out the new form of school board organization.

He was elected president of the new board in the spring of 1906 and remained president for three years. He then was vice-president for the next four years, and chairman of the business committee for the next seven years. In the spring of 1920 he was again elected president and holds that position at the present time. Since the spring of 1904, that is, for twenty years, Mr. Davis has been a member of the board of education and during seven of those years he was the president.

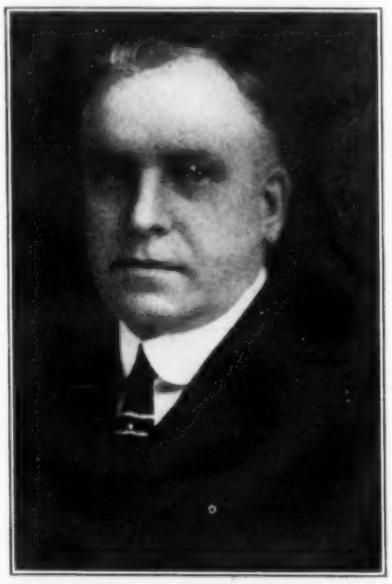
Mr. Davis has given to the affairs of the board of education the same careful attention and honesty of purpose that characterized him in all of life's relations. He takes nothing for granted. He does not express an opinion until he has had an opportunity to form an opinion based on knowledge. Mr. Davis is, therefore, essentially a conservative but not of the standpatter type. When he sees that a thing is right and for the advantage of the schools of Grand Rapids, he does not hesitate to take a stand and stick to it.

The fact that a man of sterling honesty and ability is willing to spend his time without compensation for twenty years in public service is one of the most hopeful signs of the soundness of our American institutions and is full of promise for the future of the public school system in America, and therefore of the perpetuity of our democratic government.

CHARLES FEILBACH
President, Board of Education, Toledo, Ohio

Charles Feilbach, president of the board of education, is also president of the Feilbach Company, wholesale grocers. His activities outside of business have not been confined to his duties as a member of the board of education. In this capacity he has rendered valuable service and maintained high standards of service, being careful at all times to provide that the big aims of the organization are safeguarded rather than that the importunities of various groups and individuals are heeded.

He has been especially interested in the various societies for crippled children and has frequently set aside all business affairs to go on some mission in connection with the work of such organizations. He is now serving as president of the Toledo Society for Crippled Children, as vice-president of the Ohio Society for Crippled Children, and as a director of the International Society for Crippled Children.



CHAS. FEILBACH,
President Board of Education,
Toledo, Ohio.

The Toledo Rotary was the first Rotary organization that sponsored the crippled children. Mr. Feilbach worked in this enterprise from the very beginning and has without a doubt rendered more service to the crippled children of Toledo than any other man in the entire city.

FRANK MENDELL WALCOTT
President, Board of Education, Sioux City, Iowa

The president of the Sioux City board of education for the school year of 1923-24 is a man particularly well qualified to guarantee school efficiency on the one hand and to guard school economies on the other. He is a typical educated business man—a man of ripe experience and still of sufficient youth and vigor and courage to believe that that which is good may be made better.

His name is Frank Mendell Walcott. He was born in Rochester, Minn., November 30, 1879, but removed from there with his parents to North Dakota where the town site of Walcott, N. D., was founded. In 1888 they removed to

F. M. WALCOTT,
President Board of Education,
Sioux City, Iowa.

Sioux City, Iowa, where Mr. Walcott and an only brother received their education. He is a graduate of the Sioux City high school. Mr. Walcott began his business career as a stenographer and bookkeeper. He later became associated with the New York Life Insurance Company and was transferred as cashier from the Sioux City office to the office at Peoria, from there to Grand Forks, N. D., and thence to Fargo, and in 1904 to St. Paul, where he became agency inspector. During this same year he was married to Miss Harriet Reuschling of Sioux City, Iowa, and was again transferred to the office at Chicago, Illinois.

In 1905 he gave up his work with the New York Life Insurance Company and became identified with the Security National Bank and later with the Woodbury County Savings Bank of Sioux City. In 1914, Mr. Walcott resigned his position as bank teller and became associated with the insurance firm of Brown & Walcott. In this capacity he has been instrumental in building up one of the most trustworthy insurance businesses in Sioux City.

Mr. Walcott brings to the board of education and to the schools of Sioux City an optimism, an outlook and a conservative trend of mind that make an ideal blend for the president of the board of education.

—At Bellingham, Wash., a reorganization of one of the large grade schools has been effected with the aid of intelligence tests conducted in the several rooms of the building. Based upon the intelligence scores earned by the pupils a reclassification of the school has been made, using the terms group three, group four and group five to indicate the section into which the pupils are placed according to their classification. The periodical mental testing of the children determines the basis upon which transfer is made from one group to another.

In order to take care of the group of children whose I. Q. rating is sufficient cause for demotion, there have been established two adjustment rooms to handle the problems of these pupils. These adjustment rooms receive pupils on a basis of chronological age, and the subsequent readjustment is made without comment from the parent and with a general improvement in the tone of the work accomplished. The successful operation of the plan in this school will be followed by its adoption in a modified way in ten further buildings.

Educational Supervision

Charles E. Scott.

III—The Economy Aim of Supervision. (Continued)

Economy Secured through Adjustment of the Task

A second type of supervisory activity in connection with the realization of the economy aim is that of seeing that the task is properly adjusted to the needs, abilities, interests, and accomplishments of the pupils. This is partly accomplished by proper classification of pupils and provision for their advancement according to ability and accomplishment. But there is tremendous waste due to the fact that custom and tradition, rather than scientific analysis of social and personal needs, determine the kinds and amounts of subject-matter that are taught in our schools.

Sociological studies are necessary to determine the requirements of social and industrial life outside of school. A broad, inclusive aim of education is social efficiency. In the light of this aim supervision, cooperating with teachers and research experts, must determine what types of activities possess values and to what extent for various groups of children. Sociological studies are necessary to determine the types, amounts, and standards of attainment of activities as judged by the requirements of social and industrial life outside of school.[10]

There should follow the elimination of all subject-matter that has no vital relation to the needs of the children for whom it is intended and the consequent selection of pertinent subject-matter and its organization according to their probable growth in capacity and experience.[11] Each subject in the program of studies and each part of each course of study should be challenged as to its place and emphasis in the curriculum on the basis of its relative value to the children for whom it is intended.[12] The subject-matter must then be organized with respect to the constants, the "minimum essentials,"[13] which shall be required of all pupils of given groups, and the variables which may be suggested to teachers and pupils as means to additional attractive and desirable achievements over and above those required of the whole group.

In connection with the sociological studies there should be made careful studies of the elimination of pupils from school with special attention to the age of leaving, the grade of leaving, reasons for leaving, and the vocational interests of children leaving or about to leave. It has been found that many children plan very definitely to leave school when they have finished a certain grade. "The choice (of time of leaving) is controlled largely by the leaving age, 15 years for boys and 16 for girls (in Cincinnati, Ohio). We have believed that children left school in large numbers because they were failing in their school work or because they did not find the kind of work they liked. These reasons are both real reasons but probably no more important than the fact that the child makes up his mind rather early to leave school at a certain time. Knowing this so long in advance ought to enable us to do one of two things—encourage him to stay in school if he is a superior child, or see that he gets training at once that will enable him to enter some occupation under favorable circumstances.[14] Just what should be done is a matter for supervision to decide on the basis of sociological and psychological data. Probably one of the first moves should be in the direction of providing some plan for educational and vocational guidance. The advisability of organizing short intensive courses in industrial arts, household arts, manual arts, commercial subjects, or in some special phase or phases of these or other courses, for the purpose of meeting the needs of special groups of children who may be planning to leave school before the completion of regular courses should be taken under consideration.

Psychological studies are necessary to determine reasonable amounts of learning that may be accomplished by children. It was suggested that the subject-matter of all courses should be organized according to the growth in capacity and experience of the children for whom it is intended. To this end careful psychological studies of the abilities and achievements of children should be made to determine what are reasonable amounts of learning of specified kinds that can be accomplished by children working under favorable conditions. When such information is at hand definite achievement goals may bet set up for pupils of each group in each of the various subjects and advancement may be made on the basis of achievement units as well as on the basis of time units. In some activities, at least, achievement units may take the place of time units as bases for advancement.[15]

Changes should follow a definite, carefully thought-out plan. How is supervision to accomplish such improvement? It is neither safe nor wise to make changes arbitrarily even though one has all the evidence necessary in his favor. Although the whole system and every practice found in it may be wrong, there will always be found some problem, some need for adjustment, more pressing than others. This should furnish the point of attack. For the sake of assuring safe and careful procedure it is suggested that the whole procedure be thought out definitely from beginning to end. The following steps furnish, at least, a basis for thinking and planning.

First—Define the problem. A careful preliminary study of conditions as they exist should be made, for one who is to change the existing order must be armed with facts. He needs a sure basis from which to work forward. Suppose, for instance, it is a problem of classifying pupils more scientifically. How are they now classified? What proportion is poorly classified at present? To what extent? How many pupils are affected? How does their classification affect achievement and progress? What has the present situation cost the district? What definite data are needed to win the cooperation of the teaching force; the administrators; the parents and taxpayers? Do means exist for collecting and handling these data? If not, how can they be provided? Finally, is this an ultimate problem, or is it merely a subsidiary problem the solution of which is necessary for making still greater improvements?

Second—Know what has been done along this line elsewhere, and what the results have been. The supervisor should be a close student of educational progress as reported in educational magazines, in educational association meetings, and elsewhere. If his problem is really a vital and important one, he will find that other people are working, or getting ready to work, along the same line. It might be profitable to visit other systems where attempted solutions are in progress. Numerous sociological and psychological studies have been made recently and are in progress. As far as possible he should be familiar with these. Particularly should he be familiar with investigations and experiments in progress in his own part of the country. The greater his knowledge of educational progress made elsewhere the less will be his need to resort to investigation and experimentation in his own system.

Third—Formulate definite hypotheses as to how the solution will work out. Will it require complete revision of present practices? Will it require additional immediate outlay of money? Will it result in ultimate economy, and to what extent? What will be the attitude of teachers toward the change? Are their theory and practices equal to the needs of the situation? What will be the attitude of administrators and patrons?

Fourth—Educate the teaching force, administrators, and the community to the point of desiring the change. It may be best to begin quietly by showing up some of the weaknesses of the present situation without any suggestion as to the purpose. The administration of an intelligence test, or of a few standardized educational tests, may suggest to the teachers that something needs to be done. Showing the results of one of these tests to the administrator or administrators, as the case may be, may bring from them the request for more information. The writer has known this to happen. That is real tact. Auxiliary educational agencies, such as newspapers, social and commercial clubs, should be used as means of winning the support of the community.

Fifth—Put the new plan into operation. All the above steps are merely preliminary, but if they have been carefully planned and carried out, the problem is half solved. There remains the work of putting the new plan into operation under carefully controlled conditions so that results anticipated may be secured as nearly as possible. If there remains doubt as to how well the plan will work out, it will be best to introduce the change gradually. If results are satisfactory, it may then be extended to include larger units or more units, as the case may be, as teachers, administrators, and patrons become convinced that the change is good and as administrative convenience can be persuaded to yield to its needs.

Economy Secured Through a More Vigorous and Purposeful Prosecution of School Work

A third type of activity in the realization of the economy aim of supervision is suggested by the possibility of securing a more vigorous and purposeful prosecution of their work on the part of both teachers and pupils. To this end there must be more ready recognition of merit, goals must be brought closer, and more frequent and more accurate appraisal of results must be made by checking up on attainments and deficiencies.

The most promising idea of modern educational theory and practice is motivation of effort. Investigation has proved that there is little educative value in forced activity.[16] Teachers and supervisors should take more account of this fact. The discovery and proper use of powerful incentives is the biggest problem of both teachers and supervisors. Teachers must know child nature better and supervisors must know both child and teacher nature bet-

[10]Snedden, David, Sociological Determination of the Objectives of Education, pp. 218, 227, 140-266.
[11]Wilson, H. B., Minimum Essentials in Elementary School Subjects. 14th Yearbook Nat. Soc. for Study of Ed., pp. 9-20.
[12]Bonser, F. G., The Elementary School Curriculum, pp. 20-21.
[13]Thompson, F. E., Typical Experiments for Economy of Time. 14th Yearbook, Nat. Soc. for the Study of Education, pp. 28-36.
[14]McCracken, T. C., A Study of the Vocational Interests of Children, p. 13.
[15]Washburn, C. W., Educational Measurements as a Key to Individual Instruction and Promotion. Ed. Res. Mar. '20:195.
[16]Rich, F. M., Better Supervision, School Board Journal, March, 1922, pp. 35-38.

ter to the end that motivation may be more intelligently and more effectively directed. To secure better motivation of pupils' efforts we must have better motivation of teachers' efforts. Teachers must be made conscious of school aims and the aims of education as well as of class or instruction aims. Supervision is responsible not only for the possession on the part of the teaching force of these but also for the dynamic quality which insures their functioning in practice.

Both teachers and pupils should be stimulated by competition with their own past records. Both should have the advantage that comes from cooperative effort. To this end teachers should have a larger part in formulating the aims and purposes of the school and in selecting and organizing the materials of instruction. There should be a modification of the recitation, assignment, and study schemes in order to secure the advantages that come from cooperative planning and execution.

A Challenge to the Supervisor

The knowledge of inefficiency or of waste of any kind and in whatever degree should act as a challenge to the supervisor who is conscious of the economy aim of supervision. The critics of the public schools have painted a dismal picture of their failure. We have reason to believe that their criticism is, in a measure at least, just. But the magnitude of the problem rather than acting as a deterrent should stimulate the supervisor to take an attitude somewhat like the football player who says, "The bigger they are, the harder they fall."

PART IV—THE DEVELOPMENT OF TEACHING ABILITY AIM OF SUPERVISION

Supervision's Obligations to the Community. Supervision's first obligation to the community is to its children, to guarantee their continuous development and economical progress while in the school's charge. To discharge this obligation the supervisor cooperates with teachers and other school officials to secure continuity and economy in the child's educational program. Supervision's second obligation to the community is to its teachers, to secure permanent gains to the community's schools by elevating the teaching practice to a more scientific level. To this end the supervisor cooperates with teachers and other school officials to secure the maximum development of teaching efficiency by exerting a conscious and continuous effort to build up the teaching force.

The Development of Teaching Efficiency—An Aim of Supervision

This may be stated as the third aim of supervision—to secure the maximum development of teaching efficiency. Effectual supervision in this sense is effectual teaching of teachers, the application of methods whereby the learner can best acquire the methods of controlling situations for himself.[1]

Building Up the Teaching Force Through Elimination and Selection

The effort to build up the teaching force should begin with the selection and recommendation of teachers. This is a privilege and at the same time a heavy responsibility. Every supervisor should welcome the opportunity to exercise a choice in the selection of his coworkers and should willingly accept the responsibility it implies. Under present conditions of certification of teachers, with the resulting great diversity in the qualifications of prospective teachers as to mental, temperamental, and professional fitness; with the present wide diversity of opinion as to what constitutes good teaching, even on the part of those who are supposed to be capable judges; no greater safeguard of the community's interests can be exercised than that of very carefully selecting the teaching force.

[1]Rich, F. M., Better Supervision, School Board Journal, March, 1922, p. 35.

Teachers Incapable of Profiting by Supervision Should be Eliminated

When we say that supervision aims to develop teaching efficiency, we assume that there is natural ability capable of being developed. Hopeless inability or inefficiency should be eliminated without hesitation. Supervision is under obligation to help the teacher as long as the teacher shows signs of profiting by the help; but the teacher who is incapable of profiting by supervision or who for any reason continually violates the principles of good teaching is a detriment to the school and has no just claim on the supervisor's time or the district's money. The elimination should come, if it is possible to bring it about thus, by way of the individual's conviction of his own unfitness. However, if it cannot be brought about in this way, lack of courage to tell the individual, in the right way, of course, that a change is desirable should not delay a change.

The Teacher with Practical Experience versus the Training School Product

In the matter of selection of teachers a few suggestions are offered. Usually there are two main sources of supply, viz: teacher training institutions and smaller school systems. Most prospective and beginning teachers look forward to teaching in a large system. As a general thing the small school system acts as a training school for the larger system. Often the office is flooded with applications that come from nearby smaller systems—the applications of teachers who are always ambitious to get into the larger system. Such teachers have the advantage of having had practical experience but it should not be assumed that it has always been valuable experience from the standpoint of training in classroom skills. Too much experience under the wrong conditions may tend to disqualify for service in a larger system one who might otherwise have been a very valuable teacher.

The training school product often possesses the advantages of enthusiasm, willingness to cooperate and to learn from others, and a general professional spirit that is sometimes lacking in the other type of candidate. The objection that the training school graduate lacks experience under practical school conditions is hardly deserving of the consideration it sometimes receives. Care exercised in selecting those having the personal requisites of a good teacher and the professional preparation commensurate with the demands of the position to be filled followed by the right kind of supervision should render this objection less valid. Perhaps we expect too much of the teacher-training institutions in the way of offering opportunities to prospective teachers for practical experience. What should be expected is that they be acquainted, through observation and practice teaching as far as possible, and through reading and discussion, with the best known tested, tried, and proved methods of teaching, and that they have a fair knowledge of the relative values of different methods of teaching when applied to specific teaching situations.

The school official should seek types of teachers. The supervisor, or other school official, who wishes to build up his teaching force through selection of new material should not depend wholly on the applications received from any source. He should determine definitely the type of teacher, or the types of teachers, he is in need of and then seek them wherever that type of teacher is most likely to be available. If possible, he should visit the teacher at work. He should get the opinion of those who are in a position to judge of her work. Some things show up in a letter that do not show up elsewhere. For this reason it is a good idea to get a letter from the prospective candidate, no matter how well you may know her personally. This need not be a formal application; in fact, an informal letter is better. It is a good idea to get the candidate's reaction to the environment, the community, and the building in which she may work. No other means is so satisfactory as talking things over with the candidate in the place where the candidate is to be employed.

Supervision Should Concern Itself Primarily with the Broad Underlying Principles of Instruction

No matter how well the teaching force has been selected there will still be large differences in teaching efficiency due to differences in training and to differences in ability and willingness to profit by training and direction, that is, mental and temperamental differences affecting resourcefulness, enthusiasm, and the amount of effort put forth. With due regard for such differences, supervision must stimulate growth and development with the ultimate purpose of bringing individual effort to its culmination in group efficiency. In his relations with his teachers the supervisor should be guided by the principle that supervision should concern itself primarily with the broad underlying principles of instruction. That is, a teacher should be directed and trained but should still be allowed to be natural in what she does in the classroom, for the details of good teaching vary as human nature varies, while the aims and principles of education are largely static.[2] Recognizing this principle, the supervisor will give the teacher much freedom and opportunity to exercise her own initiative so long as her procedure conforms to recognized principles of method and technique and to the aims of the school and of education. Supervision has a tendency to deal too much with details, to be too much a matter of devices and technique.[3] Given a teaching force, capable with respect to professional preparation, mental and temperamental fitness, broad-minded and open-minded, hope for improvement of instruction lies in clearer definition of aims, better understanding of principles of learning and teaching, and more intimate cooperation for the purpose of disseminating items of progress. The supervisor is concerned primarily with securing more knowledge of the task to be done, more definite planning in its accomplishment, and more skilful application of the principles of learning and teaching in practice.

Laying the Foundation for Cooperative Effort. The third principle of supervision is that the supervisor should lay the foundation for cooperative effort in the common understanding of, and the common points of view, concerning certain fundamental factors and principles with which both supervisor and teachers are concerned. The main fundamental factors and principles with which both teachers and supervisor are concerned include (a) the aims of education, of the school, and of instruction, (b) the materials and means (pupils and subject-matter) of instruction, (c) the principles underlying the control of materials and means, and (d) the particular school situation in which supervisor and teachers are working together.[4] It is not enough that the individual teacher have clearly defined aims; but these should be in agreement with those held by other teachers and the supervisor. It is not sufficient that the individual teacher know child nature and subject-matter; but she should hold in common with her fellow teachers and her supervisor points of view concerning these and their relation to one another.

In order that there may be some common ideas concerning methods of teaching, there must be a common understanding of principles underlying method. Some uniformity of belief concerning the particular school situa-

[2]Stockton, J. L., Effective Supervision, Education 33:341.
[3]Nutt, H. W., The Supervision of Instruction, p. 17.
[4]Adapted from what Nutt calls "the first principle of method." Nutt, H. W., The Supervision of Instruction, p. 36.

tion in which they are working together is necessary in order that supervisor and teachers may fully realize the possibilities and the limitations of their tasks.

Agreement developed through the teachers' meeting. By what means is such agreement to be brought about? The conference offers one of the best means of modifying and unifying purpose. Each teachers' meeting should be planned to meet some specific need. The essentials to successful doing are definite aims, knowledge of materials, skill in controlling materials, and enthusiasm. In which of these essentials are teachers lacking? The answer to this question should determine the kind of teachers' meeting to be planned for. If the need is for more definite aims or for better agreement as to acceptable aims, the plan might well be to make a study of aims as set forth by the best students of education. If the need is for more skill in the control of materials, the demonstration of certain principles in practice should be provided for to be followed by group discussion.

The supervisor should make as careful plans for the teachers' meeting as he would for the teaching of any class. Teachers' meetings are likely to be too general in scope. Each one should, as stated above, meet some specific needs. For example, the need of more skill in controlling materials might be analyzed and found to be the need for more intelligent motivation. In this case, the demonstration should be planned to illustrate certain principles of motivation in practice.

The common aims and purposes of teachers should tie up rather closely with the aims and purposes of education and of the school in which they are working. The aims and purposes of education, of the school and of instruction should be set forth rather fully in the courses of study. Usually, however, this is not done, and it becomes the duty of the supervisor to formulate them and to acquaint teachers with them or to direct their formulation in group conferences. The latter is the better procedure, provided the teaching staff is equal to the task and time can be provided for such conferences, the meeting of committees, investigations, and reports necessary to such a procedure. The interpretation of courses of study or the construction of new courses of study in this manner should result in more detailed and better analyzed statements of ends conceived as experiences through which children are to pass and in less space given to formal statement of means in terms of pages or chapters of a book.

The group conference may well take the form of a group project including, for example, the study of certain principles of method for one or more meetings, followed by their demonstration in practice by one of the best teachers. For this purpose there should be available several copies of the best books on education. The supervisor may take advantage to teach through their use the proper use of the textbook in the classroom. In fact, it has been suggested that the teachers' meeting should be the supervisor's project lesson. It is not a bad idea. If the principle that the teacher should be able to guide in the classroom without dictating holds true, then the same principle holds true with regard to the supervisor's relation to his teachers.

Whatever form the teachers' meeting takes, its purpose should be announced beforehand so that all who are interested may make whatever preparation is necessary and so that all may come prepared to derive benefits from the meeting. Typewritten or mimeographed outlines of the plan of the meeting may be used to advantage and are valuable for purposes of filing in order that there may be continuity and sequence in the work taken up.[5] Minutes of meetings may serve the same purpose and, in case of addresses by outside speakers or of significant points brought under discussion by members of the group, may be convenient for reference later on.

The teachers' meeting may be given over to group study under the direction of the supervisor or some other capable leader. As a general thing, however, it should be a clearing house for teachers' difficulties—a place where teachers come, voluntarily, to get help and to help others. The supervisor should bear this in mind always when tempted to use the time for making announcements and giving directions that might more effectively be sent out from the office in mimeographed or typewritten form. The teachers' meeting is the supervisor's opportunity to secure group action where group action is most economical and effective, and a place where he can get the teachers' reactions to his own ideas before he promulgates them as fixed and definite directions and plans.

Developing agreement by means of directing teachers' study. In the direction of teachers' study, both group and individual, the supervisor has a splendid opportunity to educate his faculty along desirable lines. To be able to secure the greatest benefits from this opportunity he should be well read himself, not only in professional literature but in as many lines of literature and as many fields of interest as possible. He should be able to suggest to the geography teacher, for instance, a splendid article in the World's Work on the Arctic regions for use in her sixth-grade geography class, to a primary teacher perhaps a good article in the Elementary School Journal on projects in the primary grades, or to the teacher of high school English a good short story that might be of interest to her ninth-grade class. To the teacher who is anxious to earn a few college credits during the school year he should be able to suggest a course that would at the same time be helpful in her work. To a teacher who is neglecting her professional reading he might casually suggest that she will find suggestions for the solution of some of her difficulties in such and such a recently published book on psychology or on methods in the elementary school. To the over-conscientious teacher who has gone to summer school, to teachers' association meetings, and who reads professional literature to the exclusion of all else, he might suggest a refreshing novel or a week-end trip that would be of more value to her, and in turn to her pupils, than more professional reading. To ease her conscience he might suggest a trip in the interest of her class or of the school with the hint that a report in assembly would be appreciated. Each teacher, according to her needs, should find the supervisor a perpetual source of suggestion and inspiration.

Developing agreement by means of disseminating items of progress. Items of interest to the whole teaching force or to any large number of them may be most economically transmitted by means of the typewritten or mimeographed sheet. More permanent directions may be printed and used year after year. The use of the mimeographed sheet is easily overdone, and care should be exercised in selecting the items of direction or of report submitted to teachers in this way. Teachers should not be overloaded with either directions or reports, and the reports should be of such nature that they will be looked forward to with interest. Each teacher in the system should make, and if encouraged will make, worth-while contributions to these reports. These should furnish a medium of exchange of difficulties met and the methods used in their solution, new and unusual types of work in progress or about to be taken up, results obtained by the use of certain methods, and the many and various other interesting things that may be found going on in any group of live teachers, things others may want to know more about and about which they might not otherwise learn. Any means that may be devised to stimulate and promote a community of interests among teachers of a school or of a system is very much worth while provided it is adapted to economical use. Needless to say, there should be provision for capitalizing interests aroused by inter-class visits.

Developing Teaching Efficiency by Working with the Teacher. Perhaps the greatest opportunity for the improvement of classroom abilities lies in the supervisor's working with the individual classroom teacher in the management of her own classroom and in the solution of her own peculiar classroom difficulties. The aims and principles of education are general, impersonal, and for the most part static; the problems of classroom instruction are usually specific, rather personal, and ever changing. The former may be studied and learned by groups of teachers working in groups. The latter are more often difficulties of technique, the inability successfully to apply a principle in practice. It is often a case of the difference between knowing how a thing should be done and being able successfully to do it. Teachers find it difficult to modify their practice to fit their theory and to fit new situations. This is especially true of teachers who started teaching before they were well prepared to teach and teachers who have taught long without supervision. New situations frequently arise to which the teacher finds no principle in her limited stock that is directly applicable. This is probably true of the best of teachers, for preparation for teaching probably can never be complete. "No fixed and limited stock of outfit of methods and principles, even if it includes all of the best known methods and principles on the day of graduation, constitutes an adequate stock, unless there be provision for modification, substitution, and even for addition."[6] One of the main functions of supervision is to help the teacher to modify, substitute for, and add to her stock of methods and principles of teaching. The supervisor must bring to the aid of the teacher who is having difficulty the benefits of his broader knowledge and experience.

The Supervisor's Broader Knowledge and Experience—the Result of many Contacts

As a result of his broader knowledge and experience he should have a fuller understanding of child nature in general and a broader, even if less intimate, knowledge of the teacher's children through previous contact with them in other work. He has a broader outlook on the particular level of work under consideration, for he sees it in all of its various relations to that which has preceded it, that which is to follow it, and to the entire school more clearly than the classroom teacher can possibly do. His broader knowledge and experience should enable him to see the school itself in its proper relation to the whole educational system, and should make him more capable of evaluating its part in the whole educational program. He should be able to see the school in its relation to the community of which it is a part. He should know what educational facilities are to be found in the community outside of the school, and what occupational opportunities are open to pupils leaving the school. In proportion as his contacts with other classrooms, other schools, other school systems, other educational agencies, and with life in general outside of the school are increased, so should his knowledge and experience increase in value to the classroom teacher. His every contact should increase his knowledge of the needs of pupils and the means and methods of ministering to these needs.

[5]Hosic, J. F., The Technique of Supervision, School and Society, 9:436-40.

[6]Wagner, C. A., Common Sense in School Supervision, p. 135.

(Continued on Page 107)

The Thirteenth Annual Convention of School Business Officials

Successful Program at Indianapolis.

Practical idealism was the keynote of the thirteenth annual convention of the National Association of Public School Business Officials held at Indianapolis, May 13th to 16th. The members who attended would perhaps declare that they are always practical and never idealistic—or, as they themselves term it, visionary. But no one who attended the meeting could, however, fail to note the constant repetition of a very simple, but thoroughly idealistic and essential principle that **the test of every business and accounting practice in school administration is the educational welfare of the children.**

The convention marked the renewal of systematic effort for securing uniform accounting practice in all states and the beginning of a nation-wide campaign for widening the influence and benefits of the association through enlarged memberships. Steps were taken for an interchange of prices on school equipment and supplies. The Indianapolis hospitality was very generous; local arrangements were handled most efficiently by Mr. Richard O. Johnson; and every physical detail for the comfort of the members and the dispatch of the convention business was complete.

The Program

The National Association of School Business Officials had its beginning about fourteen years ago, in a conference of five school board secretaries, who met in Washington at the request of government officials for a conference on uniform reporting of school finance statistics. The spirit of this first conference which was entirely in the direction of an exchange of experience, a helpful study of correct principles of accounting and business management and a genuine desire to be of the greatest mutual help—has continued and was noticeable in the Indianapolis meeting in a marked way. The older men who have grown gray in the service of city school systems were free in telling of their experiences and of their methods and as anxious to help the young newcomers as any group of men could be. There is at the meetings of this organization a cameraderie and a spirit of friendliness, a lack of formality, and a desire for helping the other fellow and of learning from him that cannot be found in any professional educators' convention.

School business officials have a longer tenure of office than any other branch of the public service, except the judiciary, and it is to this fact that much of the efficiency and stability of city and town school administration is due. This efficiency and stability of service have been carried over unconsciously by the members into the work of the association and are noticeable in their methods of electing officers, of developing programs, and of doing committee work.

The convention at Indianapolis did not develop any extreme views or entirely new suggestions for new methods of conducting the business of schools, but it did in a very marked way illustrate the systematic methods which the business managers are developing and how school business methods are being gradually improved in line with the best public and private developments in accounting, purchasing, building construction, heating and ventilation, and city school financing.

It would be rather useless to say that any one address proved to be a "high spot" of the convention. Probably the greatest interest was aroused in the impromptu speech of Senator Beveridge, but in practical application to the work of the members this was rather secondary to the addresses made by Mr. Mark Thomsen of Cleveland, Mr. S. A. Challman of St. Paul, and Dr. Frank M. Phillips of the United States Bureau of Education.

The First Session

Mr. Charles R. Yohe, president of the Indianapolis board of education, Supt. E. U. Graff, and Mr. R. O. Johnson, business manager of the Indianapolis schools, welcomed the meeting in brief, cordial addresses. Mr. George F. Womrath of Minneapolis responded, and with these ten-minute preliminaries, the convention got rapidly under way.

President D. D. Hammelbaugh made a characteristic address in which he summarized the work of the past year and made specific recommendations for future work. He urged that a definite campaign be made to increase the membership of the Association and thus spread its influence and service. He advocated a committee to promote with the several state departments of education, the uniform system of accounting. He proposed that a study be made of the disputed question of the relations and functions of the business department and of the educational department in city school affairs.

The Functions of the Secretary

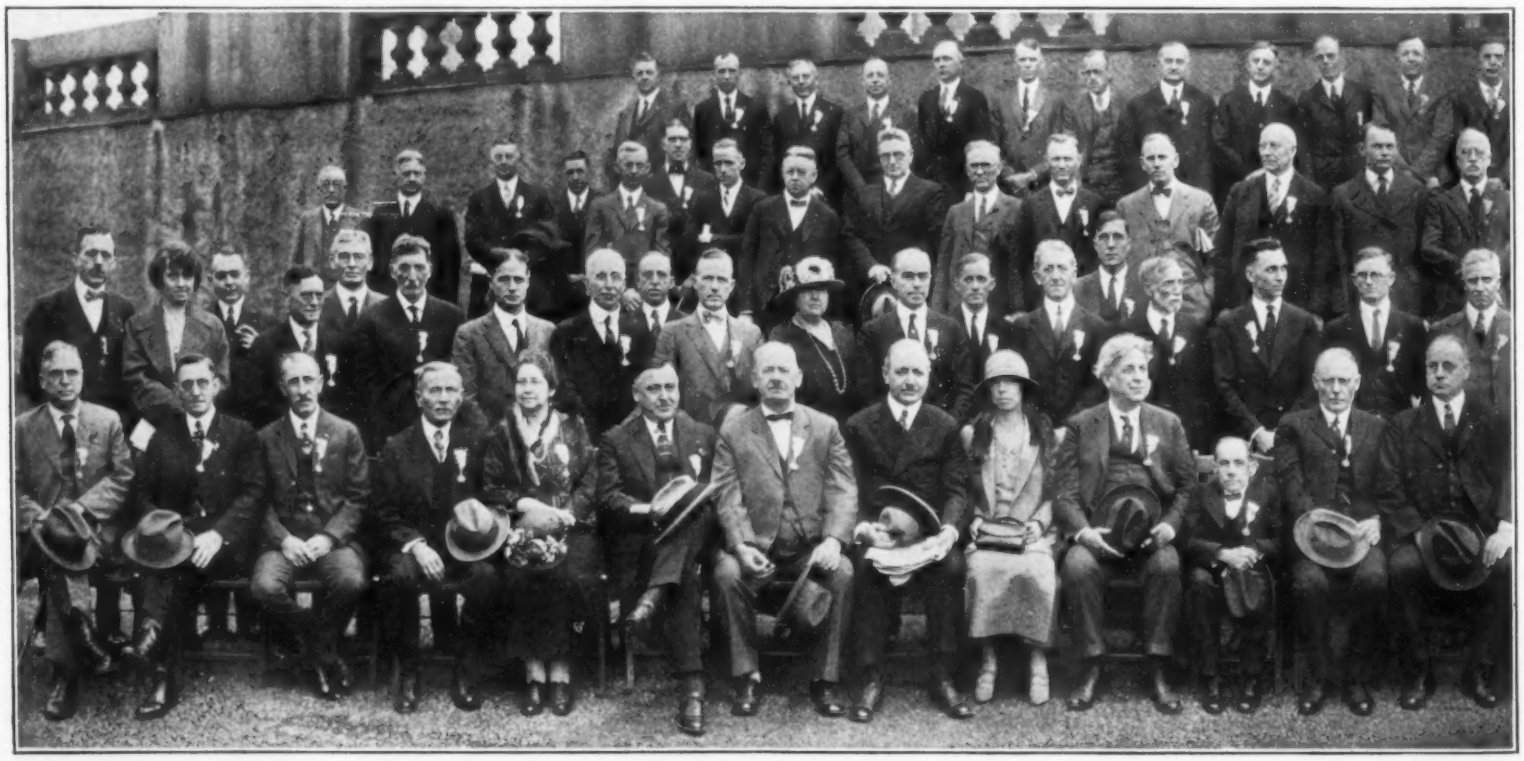
In a thoughtful paper, Mr. James F. Dunphey, secretary of the Paterson, New Jersey, school board discussed "The Functions of the School Board Secretary in His Relations to the Superintendent, the Board, and the Community." After defining the work of the secretary in handling the business affairs of the board and discussing his qualifications, Mr. Dunphey said in part:

"The law provides that, 'The superintendent of schools shall, when required by the board of education devote himself exclusively to the duties of his office. He shall have the general supervision over the schools of the district and shall examine into their condition and progress and report from time to time as directed by the board of education. He shall have such other powers and perform such other duties as may be prescribed by said board.'

"The superintendent of schools is an educator, his business is education, his preparation for his lifework was mainly along educational lines in contrast to that of the business man. The qualifications of the business man will not be the same as those of the educator, therefore, a businessman is not selected for the superintendent's chair, neither do boards of education select a person whose lifework has been devoted to education to be their representative in carrying out their general financial program. As the general field of financial control and fiscal policy is delegated to the secretary, just so should the responsibility for the carrying out of the educational program be delegated to the superintendent. It is unreasonable and unfair to expect the superintendent to prepare himself in a dual capacity and to shoulder the responsibility of both the fiscal and educational programs. Either program is a man's job, and the man who can satisfactorily hold down both jobs is exceptional and hard to find. However, it must not be forgotten that a great part of the activities and needs of the school system will originate in the office of the superintendent of schools and the success of the system depends in a large measure upon teamwork between the superintendent and the secretary of the board. In fact, the superintendent's work cannot be successful unless he has the support and the assistance of an efficient business management working under the guidance and direction of the secretary of the board.

"Therefore, when we consider what is involved in carrying out the two separate and distinct but parallel programs, the closest cooperation must exist between secretary and superintendent. The duties of the one supplement and complement those of the other. The fundamental business of a board of education could not be carried out without the dovetailing so to speak, of the business and whereby the educational facilities are provided, with the instruction of the pupils who use those facilities. The fields of labor of the secretary and the superintendent of schools are more or less separate and distinct, as indicated by the quoted passages from the school law, but both officers will have a common interest in many problems that can be solved satisfactorily only when they understand clearly each other's viewpoints. For instance, the formulating of the board's building program requires that the city superintendent report the needs for the housing of the children, and the secretary under the direction of the board provides the plans, reports on the availability of sites, estimates of costs and must be depended upon to a large extent to handle the financial situation."

In summarizing the situation, Mr. Dunphy made it clear that there are many functions which the secretary must perform as an independent, or at least coordinate, officer of the school board and that the best interests of the schools are conserved when his position and his work are duly enhanced and respected. The board of education which is the democratic representative of the community, has the distinct duty of coordinating the work of the secretary with that of the superintendent who is the educational executive and the highest executive officer of the school system. There is no inconsistency in keeping the office of secretary independent and coordinate in those functions



MEMBERS OF THE NATIONAL ASSOCIATION OF SCHOOL

which do not touch upon educational interests.

The discussion which followed showed that the position of the secretary and his relations involve some disagreements. Mr. George F. Womrath of Minneapolis, made it clear that in his estimation the superintendent must necessarily be the chief executive and the secretary must be subservient to him. The superintendent must initiate and must provide the fundamental data for all educational as well as business management of the schools. There cannot be the highest efficiency without unity. The present need is for better superintendents of schools, rather than for broadening the functions of the secretary. Dr. George W. Gerwig of Pittsburgh declared that the real need is for a better understanding of democracy in school government and for obtaining composite decisions in all fundamental principles and methods of the schools. Mr. H. N. Morse of New Jersey closed the discussion with a statement that the school board is finally responsible to the people and that it is equally important that there be a strong educator as superintendent as well as a strong businessman as head of the business administration of the schools.

The Afternoon Session

The second session opened with the reading of a suggestive paper prepared by Mr. H. W. Anderson of Kalamazoo, Mich., who was unfortunately unable to be present. The paper will be reproduced in the July number of the Journal.

Mr. H. C. Roberts of Sioux City, Iowa, read a suggestive paper suggesting the establishment of a clearing house for exchanging data on prices and service. He showed that there are extreme variations in the prices of certain equipments and that a cooperative price exchange will do much to obviate the present inequalities. "There is reason," he said, "to expect a certain degree of price difference on the basis of quantity purchases, carload shipments, and extraordinary conditions. However, a variation of forty per cent on the same standard article of school furniture can scarcely be justified. There is every indication that competition rather than the cost of production and distribution constitute the basis of these quotations. Bargain prices are attractive, but I believe that the one price company merits and secures the confidence, if not always the preference, of purchasing officials. The wider dissemination of quoted prices, the better will be the opportunity of purchasers to protect themselves, and the greater the tendency to stabilize prices on a fair and consistent level." Much of the information now exchanged on prices is not dependable, in his opinion, because there is no indication of the quality or of the specifications given in different communities.

Financial Reports

The subject of financial reports was presented from the standpoint of a city school accountant by Miss Corinne M. Clark of El Paso, Texas, and from the standpoint of state departments of education by Mr. J. E. Wagner of Harrisburg, Pa. Miss Clark declared that, while there is a real need for the annual financial report because the school authorities are servants of a public trust, and as such must make an absolute public accounting, there is no uniform practice in making reports or in using them. Comparatively few cities print understandable analyses of their financial operations and still fewer cities present these to the community so that there is a wide popular understanding of the local operations.

School reports are usually seen only from the local standpoint. In a discussion of the problem from the state point of view, Mr. J. E. Wagner of Pennsylvania applied some principles which, if generally understood, would greatly increase the interest of school authorities in accurate and uniform accounting. Mr. Wagner made clear that the fiscal policy of any state system of schools is largely dependent on the information which is gathered from the local communities. The state department is required to give advice to local authorities on every possible phase of school work. It is further required to see that the laws of the state are administered uniformly and wisely. It is essential that the state department administer the state schools not only for their present welfare but also for future development and usefulness. All of these problems depend for their solution to a large degree on accurate accounting of facts relating to children and their education, and of the financial conditions and operations of the respective school districts.

The Wednesday Sessions

Dr. Frank M. Phillips, Chief Statistician of the United States Bureau of Education, opened the discussion on Wednesday morning with a very thoughtful paper on "Uniform Accounting and a Resume of the Present Acceptance of the Uniform Accounting Blank Adopted by the Bureau of Education."

The reports received by the Bureau in 1922 indicate that cities of 100,000 population and upwards are practically all using accounting systems which produce results equivalent to those called for by the uniform system of accounting. A few cities failed entirely to report and a small number reported unsatisfactorily. Of the cities with a population less than 100,000 and larger than 50,000, 69 per cent or 170 cities, sent excellent reports; 25 per cent sent fair reports, and the balance sent either no report or an unsatisfactory report. Of the cities having less than 50,000 population, 56 per cent sent good reports. The showing of the small cities is as good as that of the large cities because in the small towns there is a lack of trained secretaries with ample accounting knowledge and experience. Mr. Phillips declared that a good school accounting system should be comprehensive, clear, current, recent, accurate, complete and up-to-date. It should afford an opportunity for analyzing the local situation, for isolating the work of the schools by departments and by functions. It should be based on uniform terminology and uniform definition.

"The Educational Opportunities of the Business Department of Public Schools" was presented in a most gratifying way by Mr. Clyde Blanchard, secretary of the Berkeley, California, schools. The solution of school business problems is relatively simple if in addition to immediate values and objectives, the ultimate aim of the schools is taken into account. School board secretaries and accountants should go into the classrooms as often as the opportunity presents itself and inform themselves personally concerning the activities of pupils and teachers. Mr. Blanchard explained in an interesting way how the Berkeley schools are operating and how the school board business office is employed as a laboratory for the commercial department of the high schools.

In a rapid fire address, Mr. Leonard B. Job, assistant state superintendent of Indiana, described the preparation of a new uniform state system of accounting. The high cost of education, the great tax burden, and the need for general efficiency in school administration have caused the state department of education in cooperation with the state board of accountants to develop an entirely new system of financial school accounting. Under the Indiana laws, money voted for the schools on the basis of funds for tuition, buildings, maintenance, etc., must be accounted for on this basis. The new accounting system provides for this and in addition includes distribution on the basis of functions. The system includes two ledgers, a fund ledger and a functional ledger. The ledgers measure only 14"x17" and are loose-leaf in type. The functional ledger is divided into seven types of accounts (a) administration, (b) instruction, (c) supervistion, (d and e) operation and maintenance, (f) auxiliary and correlated activities, (g) fixed charges, including current interest, (h and i) debt service. The system affords an opportunity for complete budgeting, classification, and for handling capital investments and depreciation.

The final paper of the morning was read by Mr. A. Howard Dell of Gary, Indiana, who presented in detail a comprehensive plan for handling depreciation of school properties.

The Afternoon Session

The afternoon session was opened with an interesting paper on the principles of unit ventilation as applied to school buildings by Mr. J. M. Robb, heating engineer of Peoria, Illinois. Mr. Robb described the operation of unit ventilators and showed that they are satisfying every legitimate demand of health authorities and educators for safe, economic, and hygienic ventilation.

Mr. R. M. Milligan presented some thought-thought-provoking material in his addresses. The paper which he read at Indianapolis contained nothing startling or radically new, but it showed how a practical architect who is engaged in the designing and the construction of a large number of school buildings, has systematized the figuring of school buildings costs and of determining accurately their pupil capacity.

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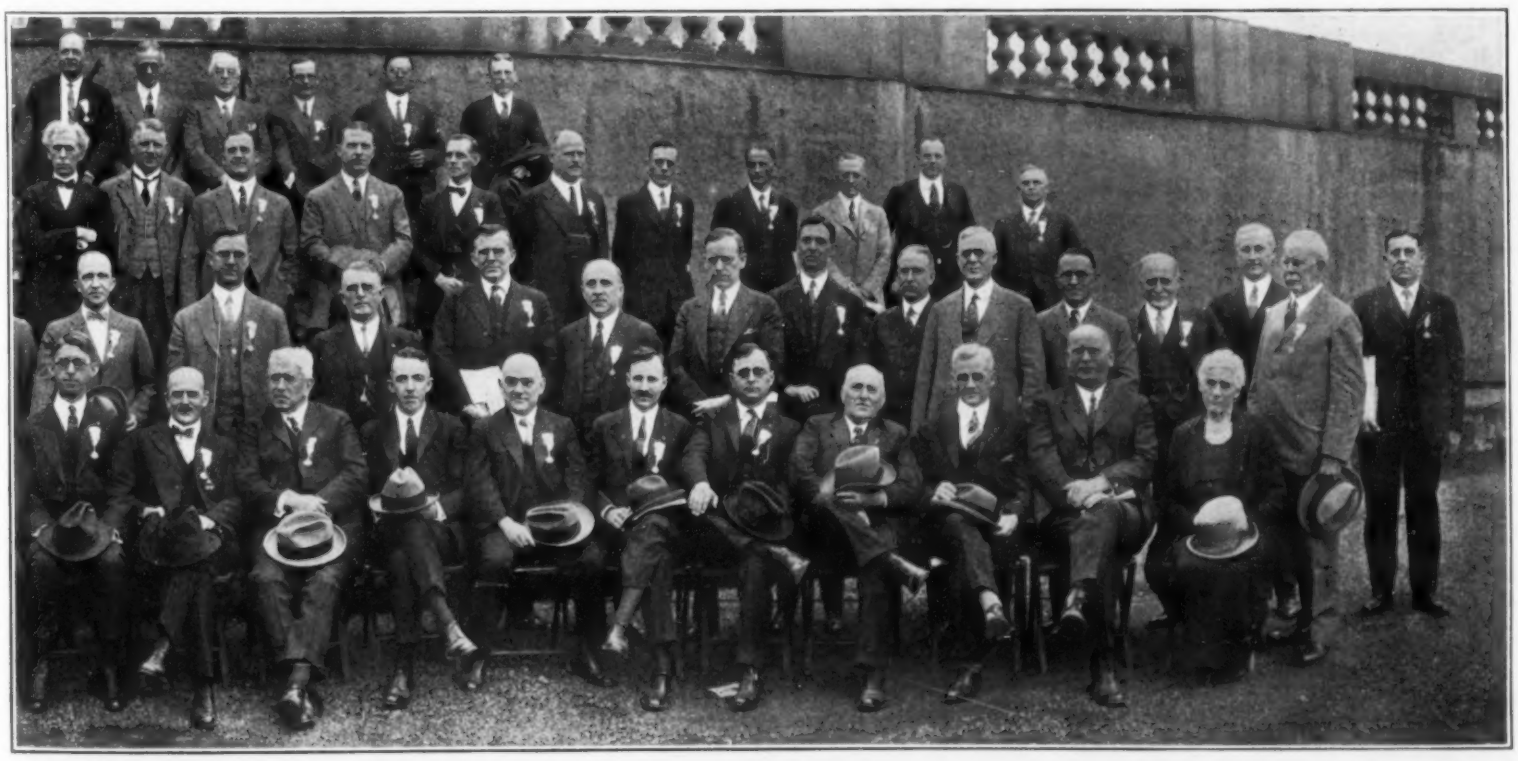

BUSINESS OFFICIALS IN CONVENTION AT INDIANAPOLIS MAY 15, 1924.

Merit Systems in the Larger Cities

Harlan C. Hines, Professor of Education, University of Cincinnati.

During the past fifteen years the question of merit listing has attracted much interest among the superintendents of the larger city school systems, and many attempts have been made to devise plans for stabilizing selection and promotion that would prove satisfactory both to the superintendent and his staff and to the teachers they employ.

There are two reasons for merit listing, or rather there may be merit lists of two general types. First, lists may be prepared that are designed to present the names of applicants for teaching positions in order of rank. And second, lists may be prepared that are designed to present the names of teachers in service, in order of rank or in order of general merit, for promotion in service. The former has to do only with selection and appointment, the latter usually with increase in salary.

In an effort to ascertain what and how many cities are employing merit systems of any description, the writer sent a personal letter of inquiry to the superintendents of schools in 65 cities having a population of one hundred thousand or more. In order that the reader may fully comprehend what was expected in return, the letter is reprinted below:

We are reorganizing the procedure for handling our merit lists for the Cincinnati Public Schools. In doing that we should like very much to know what plan is followed in your city.

Would it be possible for you to send us a brief statement (it may be you have one prepared in printed form) describing the merit system you use, and whether it is designed to regulate the selection of teachers or the salary paid them, or both?

If no merit system is employed will you please write me to that effect, stating reasons, if any, why none is in use.

Replies to the above letter were received from 48 superintendents. In but seven cities of the 48 is there strong evidence of a merit system designed to care for the selection and appointment of teachers, while many cities have worked out merit systems of various types for promotion and increase in salary. Because of the variety of plans in use, excerpts from letters from superintendents or from printed material appear below:

Atlanta—In reply to your letter of recent date wish to state that our schools have no merit system.

Baltimore—Elementary schools: All candidates for positions as teachers in elementary grades must pass a competitive examination in "training and knowledge" and demonstrate their "aptness for teaching," as required by the Charter, before they can be placed upon the graded lists. The examination in training and knowledge shall cover as far as possible the prescribed course in the teachers' training schools. The standard for passing shall be a general average of 75 per cent, with no mark below 50 per cent. The names of accepted candidates shall be placed upon lists in the order of their respective qualifications, as determined by such professional examination.

Secondary schools (junior and senior): No merit system is provided for in set rules and regulations, but "fitness for appointment to teach in the secondary schools shall be determined by careful scrutiny of such diplomas or certificates of graduation as may be issued by colleges of good repute or by examination, oral or written, disclosing equivalent qualifications in subject or subjects which the candidate proposes to teach. Candidates who cannot show these qualifications cannot be considered. Proof of success in the actual work of teaching, as well as the possession of the requisite knowledge, will be considered."

A Southern Plan

Birmingham—Salaries of heads of departments and instructors in high schools and of grade teachers in elementary schools shall be grouped in three classes, C, B, and A. **Class C** shall consist of temporary or assistant teachers who shall be employed by the day. **Class B** shall constitute the regularly qualified or professional list of teachers in elementary and high schools, whose salaries are fixed under the schedule at a specified rate per annum. **Class A** shall constitute a distinguished service group. Elementary teachers, who shall hold standard college or university diplomas, and who shall have reached the maximum salary under class B, with an exceptional record of distinguished service, may, at the discretion of the board of education, be advanced to class A, with a maximum salary of $2,000. High school instructors and heads of departments, under similar conditions, may be advanced to class A, high school, with a maximum salary of $2500 and $3000, respectively. Graduates of standard college or university, entering upon elementary grade work, will be credited with one or two years of service in the salary schedule. Applicants who shall have served in other schools will have such service evaluated upon their appointment; provided that no teacher of academic subjects so appointed, in elementary or high school, shall be credited in the salary schedule with more than five years of service.

Boston—In all rating plans for the promotion of teachers within the service who have obtained the proper qualifying certificates by examination, the board of superintendents has secured the data for evaluation of the candidate under the following items: educational preparation, administrative and executive experience, professional interest and growth, and personal characteristics and teaching ability, with emphasis placed upon teaching ability. Principals are asked to rate teachers in service on personal qualifications, professional qualifications, school management, and classroom instruction.

Cambridge—Ratings of applicants by the board of examiners shall be obtained as follows: (1) in scholarship; by written examination, when required; in case the applicant is not required to take a written examination, the rating in scholarship is obtained by averaging the marks received in higher institutions or those given in teachers' certificates; (2) in experience obtained after graduation from college or normal school; (3) in personal fitness, by oral examination, evidence relative to character and previous teaching experience, and medical examiner's report. Two lists are prepared, one for residents and one for non-residents.

No System in Chicago or Cleveland

Chicago—We do not have a merit system, so-called. We call it a promotional system for the advancement of teachers upon our salary schedule.

Cleveland—No merit system is employed. We gave it up owing to the difficulty in administering it.

Dayton—Teachers, supervisors, principals and all assistants and special teachers shall be promoted only upon merit. Merit shall be understood to mean: (1) successful experience; (2) growth in the profession as indicated by attendance at summer schools, educational travel at home or abroad, extension work, correspondence work, and participation in activities outside of regular school work; (3) the ability, at any time, to pass a physical examination given by one of the doctors employed by the board of Education. Principals and supervisors are asked to rate teachers on personality, professional equipment, teaching ability, health, housekeeping, and interest in community life.

Denver—We do not have a merit system in Denver. Our salary increases are based on preparation and length of service.

Des Moines—We do not have in the Des Moines schools any rating system for teachers.

Detroit—The principal of each school is asked to prepare a rank order list of all his teachers after he has rated them on vitality, personality, general intelligence, social intelligence, professional spirit, control over method, professional leadership, executive ability, and adaptabillty. The "human scale" method of interpreting values, such as utilized in the American army, serves as a guide for the ratings.

Fort Worth—Principals and supervisors are asked to rate teachers on personality, ability to interest pupils in school work, results obtained from instruction as seen in pupils' reactions, character of discipline, scholarship, methods, cooperation, and neatness of room and work. Salaries of teachers are affected by their ranking on the rating sheets, those ranking above a certain mark being paid the maximum salaries.

Grand Rapids—No merit system in connection with selection of new teachers. Principals and supervisors rate teachers on professional attitude, instruction, discipline, personal attributes, and routine. On the basis of the ratings a teacher is marked "satisfactory" or "unsatisfactory." If "unsatisfactory" she may be dropped. If "satisfactory" she is promoted to the next higher salary.

Hartford—We have no merit system in use in the Hartford schools.

Indianapolis—We do not make use of a merit system in our city schools. Teachers, when retained after they are placed upon the salary schedule, are advanced $100 each year until they reach the maximum of $2000. Our teachers are rated by the supervisors and in case we have promotions to be made this rating is taken into consideration in making such promotions.

Jersey City—Teachers are promoted in salary according to schedule, upon the completion of a year's successful service; the principal of the school, the director of the board of education having charge of that school, and the superintendent making the recommendation. Principals are promoted in salary upon the completion of a year's successful service, the superintendent and the member of the board of education representing said school making the recommendation.

Violent Opposition in Los Angeles

Los Angeles—Qualifications for entering the Los Angeles city school system are practically fixed by the state authorities. No merit system is employed due to the violent opposition of the teachers because of their objection to any one passing upon their merits in a comparative way. Principals are asked to make quarterly rankings of the teachers in their buildings without stress upon single points.

Milwaukee—Two rating cards are used. One is for the rating of substitutes, being sent in by the principal after two days or more of teaching in each case and gone over very carefully when appointments are made to determine probable success and satisfactory placing. The other is for the rating of all regularly appointed teachers, made out by principals once each year, and forming the basis for appointment to the permanent list (at the end of the fourth year of successful teaching) and for promotions within the schools. Ratings do not affect salaries. Regularly appointed teachers are rated on thirty-eight separate points, while substitutes are rated on success in teaching, skill in discipline, ability to lead and inspire, influence on pupils, sympathy with children, interest in work, and personal appearance.

Minneapolis—Single salary schedule in operation. Principals are asked to rate three types of teachers: (1) those on probation (1st, 2nd, 3rd year); (2) regular teachers recommended for more than the automatic annual increase; (3) teachers not recommended for retention in building, including those recommended for retirement, transfer, etc. Those three types are rated on four general points, such as, personality and character, equipment and technique, pupils' response, and classroom conditions, each of which is divided into many subheads.

Nashville—Teachers shall be elected annually until they have served as regular teachers for at least three years. After this period, they may, at the discretion of the Board, be selected by the Board for the distinction of being exempt from the annual election because of faithful, efficient, and loyal service. Teachers thus hon-

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Comparative Costs and Work-Study-Play Organization

John G. Rossman, Assistant Superintendent, Gary, Ind.

The last few years have seen an ever increasing enrichment of the public school curriculum and the end is not yet in sight. Coupled with this there has been the enactment and enforcement of compulsory school laws; the lengthening of the school term and a very great increase in the number of pupils enrolled in the high school. These factors have tended to bring into the public schools a very much larger number of pupils and to keep them there for a much longer period both as to days within the year and years within the school course. The result has been that a constantly increasing amount of money is being demanded for the maintenance of these schools both as to cost per pupil enrolled and in the sum total.

The American people have pledged themselves to the support of the public schools. Our form of government demands that they be fostered and promoted to their greatest efficiency. The support given them has been, generally speaking, liberal and unstinted; but it would seem that there must be a limit to the demands made by the school upon the taxpayer's dollar. Not only from within school circles but also by the layman himself is the question being raised as to whether we are getting the greatest possible return from each dollar invested. Forward looking persons cannot help seeing the impossibility of providing an adequate education for each child according to his needs or of financing the schools in a satisfactory way if the present scheme of organization and management continues.

Conventional Weaknesses

The short school day, the providing of a seat for every child, the utilization of only part of the plant at any one time, the many small units, the large overhead expense and the small number of hours in a year's time that a very expensive plant is operating, all these are practices of the present conventional organization which meet with unfavorable criticism on the part of efficiency engineers and business men.

Within the past few years more and more attention has been given to the Work-Study-Play, the Platoon, or the "Balanced Load" form of school organization. Recently there have been adaptations or reorganizations in many of our leading cities with a view of utilizing school plants for a longer period each day and at the same time using all of the plant all of the time, assigning but one desk for each two pupils, decreasing the number of buildings and thus cutting down the overhead and, with all this, affording the child a better balanced program with a more highly enriched curriculum.

A Comparative Study

It is the purpose of this paper to make a brief study in comparative costs. Four schools in almost the same community, all in the same county and all with almost the same community problems and with the same length of school term, afford the opportunity for the study. Two of these schools, hereafter known as cities A and B, are operated on the Work-Study-Play basis or a modification. Their school enumeration shows about seventeen thousand and eleven thousand persons between the ages of six and twenty-one respectively. The other two, hereafter known as city C and city D, use the conventional form of organization and have a population of persons of school age of about thirteen thousand and three thousand respectively. All data for the study have been secured from the office of the county superintendent and are the figures which each school has itself recorded. The average daily attendance has been taken as the basis for all interpretations unless otherwise indicated.

Costs Per Pupil

The cost per pupil is usually considered as a proper basis of comparison. In this instance this includes all expenditures except those of capital outlay. In cities A and B the costs were $99.18 and $93.70 respectively. In cities C and D they were $134.53 and $126.37 respectively. (See figure 1.) Although the conventional schools would seem to cost about thirty per cent more to operate than those of the Work-Study-Play type, it might be claimed that this grew out of a greater amount spent for strictly instructional purposes. This, however, does not prove to be true when considered comparatively as is shown by Table I:

TABLE I—Cost Per Pupil

	A	B	C	D
General control	$ 4.07	$ 2.81	$ 4.32	$ 6.94
Instructional service	73.23	65.51	80.51	74.08
Operation of school plants	8.23	13.86	27.47	20.38
Upkeep—maintenance	4.91	3.06	5.63	1.24
Fixed charges	6.65	6.19	10.69	22.13
Other expense items	2.09	2.27	5.91	1.60
Grand Total (Other than capital outlay)	$99.18	$93.70	$134.53	$126.37

In fact, out of each dollar expended in city A seventy-three cents goes toward instruction, while in city C, for example, only sixty cents is used toward the end for which the school primarily exists. This is simply another way of saying that in this one Work-Study-Play school twenty-seven cents out of each dollar are needed to keep the machinery going while in the conventional school forty cents are required. The real difference in cost comes almost entirely from costs found under the heads of operation of plants (Figure 2), fixed charges, which include interest and insurance (Figure 3), and the miscellaneous accounts. Not one of these is an instructional cost in so far as classroom work is concerned. If the instructional opportunities are the same, then it follows that there can be little justification for this expenditure of thirty or more dollars per pupil on the part of the conventional school in excess of that which the Work-Study-Play school expends.

City B, which shows the least per capita cost, has also the lowest median salary for teachers, $1,621.65, but city A, which ranks second in per capita costs, pays its teachers the most liberally. Its median is $1,748. The medians for cities C and D are $1,664.84 and $1,660 respectively.

The Per Capita Investment

Many cities today are finding themselves "school building poor." They have tied up so much of their capital in brick and mortar that there is little left for instructional purposes after sufficient has been taken from the current funds to retire bonds, pay the interest and depreciation, and operate the plant. It is one of the outstanding claims of the Work-Study-Play plan of organization that it does not tie up so much of a community's capital in buildings. Or, stated another way, that it gets a much greater return on each dollar invested so far as building accommodations are concerned.

In city A and city B the Work-Study-Play organization requires an investment of $256.59 and $236.97 respectively per pupil. The conventional program in cities C and D requires $694.69 and $520.96 respectively. It is only fair to state that in cities A, B and D the actual costs are used as a basis, whereas in city C replacement estimates are considered. Even making the most liberal allowances for these differences, we find that the Work-Study-Play type of organization has a decided advantage. Fixing the interest rate at five per cent and the depreciation rate at four per cent, city A finds that it spends $23.09 per pupil for these purposes, city B spends $21.33 on the same basis, cities C and D spend $62.52 and $46.75 respectively. The point may be raised that the plants of cities A and B are not in so good a condition as those of C and D. It would be difficult to show this conclusively. It is true, however, that both cities A and B have all of their children, except kindergartners, on a full day session and this is not true in the case of city C.

In outstanding bonded indebtedness the Work-Study-Play schools show a decided advantage. They owe $124.19 and $99.12 respectively per pupil, while the conventional schools owe $187.22 and $371.39 respectively (Figure 4). This is simply another way of stating that for years to come the conventional schools will be compelled to divert funds from the instructional needs to the building needs.

Meeting the Community's Needs

It is altogether possible, however, that cities C and D may be laboring under very great disadvantages as compared with cities A and B. It would seem from the following that the exact reverse is true.

Of the entire school population city A and city B have 73 per cent and 57 per cent respectively enrolled in the public schools, while cities C and D have 52 per cent and 57 per cent in their schools.

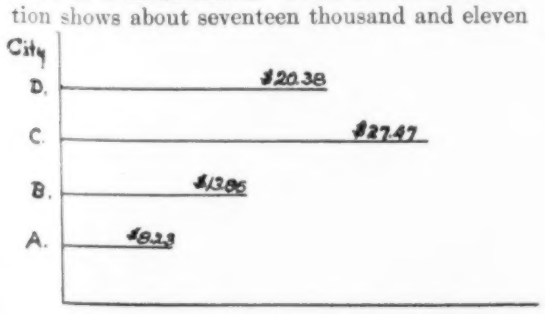


FIG. 1. INSTRUCTIONAL COST PER PUPIL.
When school A was spending $1.00 school B was spending 94 cents. At the same time the schools on the conventional basis of organization were spending about $1.30.

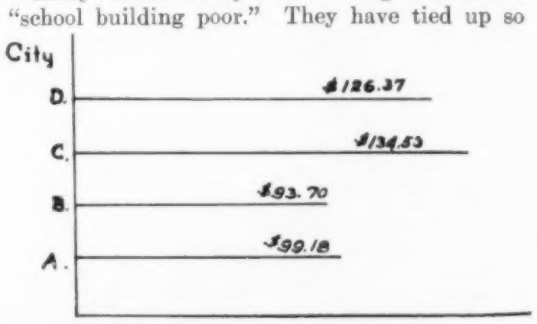


FIG. 2. OPERATION OF PLANT COSTS.
While the work-study-play schools were spending $1.00 and $1.68 respectively for operation of plant the conventional schools were spending $3.33 and $2.47, respectively.

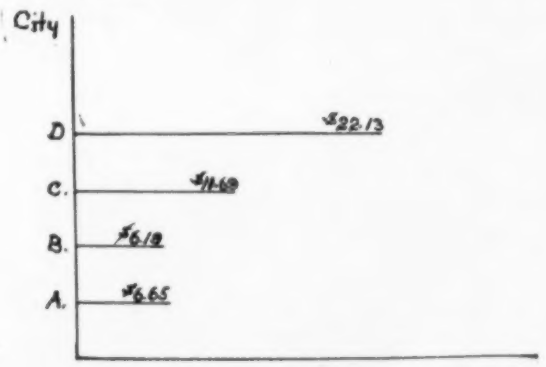


FIG. 3. FIXED CHARGES.
A much larger capital outlay in the conventional building makes for a larger fixed charge.

It might follow that city C and city D have higher costs because of this small enrollment and this would be convincingly true if their tax rates were lower on the same basis of assessed valuation. In actual practice the rates for the respective cities are 76 cents, 80 cents, $1.10, and 66 cents for each one hundred dollars of assessed valuation. To clear up the inequalities the assessed valuation per pupil enrolled has been equalized in such a way as to place back of each pupil attending an equal assessment in dollars and cents. On this new basis the comparative rate becomes 76 and 84 cents for the Work-Study-Play schools and 92 and 97 cents for the conventional schools. In other words, the difference in rate is a real one and not one due to any local conditions in assessing.

The question may be raised as to the number of pupils per teacher. City A and city B have 34.4 and 32.3 respectively. City C and city D have 26.4 and 35.1 respectively. In this particular, city C has a decided advantage if it would be desirable to have as small a load as 26 pupils. Recent investigations tend to show that the classroom with 26 pupils has few if any advantages when compared with the classroom of 35. On the other hand, especially might there be considerable question as to the legitimacy of this procedure in view of the financial conditions in city C.

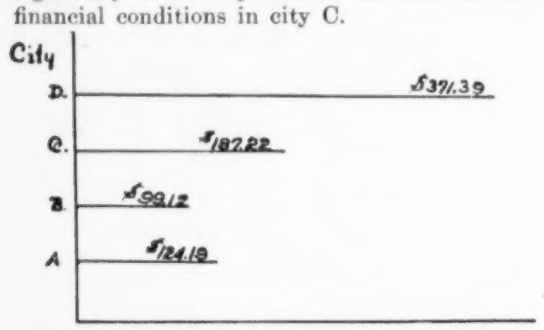


FIG. 4. OUTSTANDING BONDED INDEBTEDNESS. The capital invester by C and D is much larger than that by A and B. Each year C and D must set aside large sums for interest, bond retirement and depreciation.

All of these cities are rapidly increasing in population but city A leads in this particular and therefore has the greatest comparative burden. According to the census figures of 1910 and 1920, A's population increased 235 per cent in the ten-year period; B's 88 per cent; C's 77 per cent, and D's 54 per cent. A also has the most extended territory or the smallest number of people per square mile. Therefore concentration is more difficult. Nevertheless city A and city B both average eight hundred pupils enrolled in each of their buildings. City C, with its conventional program, averages four hundred pupils per building, while city D, which is by far the densest in population, enrolls fewer than three hundred per building.

The Real Measure

By and large the advantage would seem to be with the Work-Study-Play schools but the half has not been told. Not only do cities A and B send out products as good as or superior to cities C and D, judged both on the basis of scores made in standard tests and on records made by high school graduates in college but they provide a much more highly enriched curriculum. Pupils in city A have a seven hour day as compared with the six hour day of those in cities C and D.

Summary

In summary, if a corporation, a school city, let us say, finds that it is not able to operate within its income, a readjustment becomes necessary. When a new policy is being considered, Mr. (city) A and Mr. (city) C are invited to present their schemes of promoting efficiency. Mr. A proves that he is able to convert 73 cents out of each dollar's income toward the purpose for which the corporation exists. Mr. C reluctantly admits that he must use 40 cents out of each dollar for incidentals and can direct only 60 cents to the real business of the concern. Mr. A demonstrates that in the matter of capital outlay he operates at the rate of one dollar per unit. Mr. C finds it difficult to attain reasonable efficiency for three times this amount. For each unit turned out Mr. A expends for interest and depreciation nine cents, while Mr. C must charge 27 cents. Mr. A establishes the fact that the product which he produces is not only equal in every way to that of Mr. C's but that it is decidedly superior.

Mr. A admits that to do all this he must break away from some of the moss-covered traditions. He shows that he accomplishes these results simply by using the plant more hours in the day and more days in the year; by keeping all of the plant busy all of the time; by concentrating his activities into a few plants, the capacity of each one of which has been increased by his longer time interval.

The Work-Study-Play plan of organization is but the application of sound business principles to school management in such a way that a greater return is made for each dollar invested not only in the matter of reaching more children but in reaching them in a more constructive way. With the rapidly mounting cost of education everywhere this plan or some modification of it would seem to merit the serious consideration of each school community.

Types of Supervisors I Have Known

G. K. Kelley, Houghton, Mich.

In my experience as teacher and principal I have rediscovered five distinct types of supervisory officers. The types which will be considered first will be the four obviously unsuccessful types. The fifth type will be reserved till last. This procedure has been found advisable in presenting the matter of supervision at teachers' meetings. It clears the atmosphere of any misapprehensions as to the policies to be pursued by the supervisory officer. Experience has shown that the open-minded policy is the only policy for both supervisor and teacher.

1. "The Swivel Chair artist" is what the first type might be called. The title is suggestive, and to make the picture more complete, he should be a corpulent gentleman who loves to sit in a big arm chair and issue orders, based on momentary judgments. On the other hand, he might be one with a mania for statistics who gets his chief ideas of what is taking place in the classroom from reports. Reports are not to be discredited for they have an invaluable place on the desk of the supervisor. Still another possibility might be that the swivel chair artist is just plain lazy. We discard number one.

2. "The Inspectorial Type." This is the man who breezes into the classroom, looks around with a knowing air and blows out. Sometimes he bids the teacher or the class a lusty good morning and makes a few supposedly nice sounding remarks before his exit. Whatever he says, whether complimentary or otherwise, must be disqualified for what one can learn of what is taking place in the classroom by poking his head into the door for a few minutes three or four times a year is of very little value. Sometimes these inspectors just walk in, pass out a few hard looks which makes the trembling youngster have heart failure and which produce almost equally as disastrous results on the teacher. Sometimes both teacher and class heave a sigh of relief when he is gone. The sigh is mild compared with the one heaved at the retreat of our next friend.

3. "The Inquisitorial Type." This fellow storms into the rooms with all the lordly air assumed by No. 2, but in addition to his lordly air he has fire in his eye. He is out for big game. He is not only going to find out what the class knows but, perhaps, what the teacher knows also. He is going to impress one with his knowledge of all high school subjects which is on tap at all times and in any amount. One will oblige him, however, by not asking for any great amount. The writer tried that once on this kind of an inquisitor who was pumping him before a class. The proof of the argument was turned over to him much to the merriment of some thirty awed high school youngsters.

4. "The Dictatorial Type." The fourth type will be recognized by the fact that he knows exactly how all subjects should be taught. He has the last word on methods and subject-matter. He has very set and definite ideas and a hobby which he leads out to exercise if occasion comes. If the occasion does not come it is sent for and brought in. This kind of a supervisor is not a supervisor, but a dictator who is trying to enforce his own pet ideas. Supervision of this type leaves no room for originality, personality, or experimentation. The supervisor's cut-and-dried methods are to be followed. The object of this kind of supervision is for the purpose of issuing orders and seeing that they are carried out. Fourth down.

5. "Cooperative Open-minded Supervision." This is the only kind of supervision that is potentially successful. Any supervision that does not take both teacher and supervisor into consideration is not in reality supervision. It is a mere inspection or an inquisition. When supervision is cooperative both the teacher and the supervisor have a mutual understanding, a mutual confidence in, and a mutual respect for each other. To be more specific, the teacher understands that when the supervisor enters his room that he is not coming in to find fault or to inspect to see that some pet hobby or some special method of teaching is being put into practice in detail. The supervisor comes into the room with an open mind and with an interest to learn what is being done.

While visiting a room the supervisor may find it advisable to take notes on what is being done and on methods of procedure but he withholds his judgment until he has made sufficient visits to enable him to become acquainted with the teacher's objectives and methods and the results accomplished. This type of supervisor makes his real business that of working out classroom problems with the teacher.

THE JOY OF BEING A TEACHER

In my many years of teaching work I have found a thousand reasons to rejoice and be glad that I am a teacher. I am glad each year when the time draws near for the new school year to begin; I am glad when the day finally arrives; I am glad to hear the school bells ring, calling the boys and girls back to their books and their work; I am glad to meet them skipping gleefully on their way to school, glad again to meet and greet their teachers — giving the lie to the Shakespearian story of the "school boy creeping unwillingly, snail-like to school." I am glad when the day's work begins and with teachers and pupils spend a few moments in song and communion with the higher and better things of life in preparation for a good day's work; I am glad to visit the classrooms and see the eagerness and joy with which they pursue their work, strengthening the chords of effort in their desire to achieve and excell. I am glad to meet and greet my fellow teachers so many of whom have been so loyal and faithful in their work that their memory is a benediction; I am glad when the day's work is over and doubly glad when the new day begins. Yes, it's a wonderful thing to be a teacher—teaching is a labor of love, it's a labor of joy.—Frank W. Simmonds.

THE SUNBEAM SCHOOL, CLEVELAND, OHIO. W. R. MacCornack, Architect of the Board of Education.

THE SUNBEAM SCHOOL OF CLEVELAND
A Model Building for Crippled Children

Clyde R. Miller, Director of Publications, Cleveland, O.

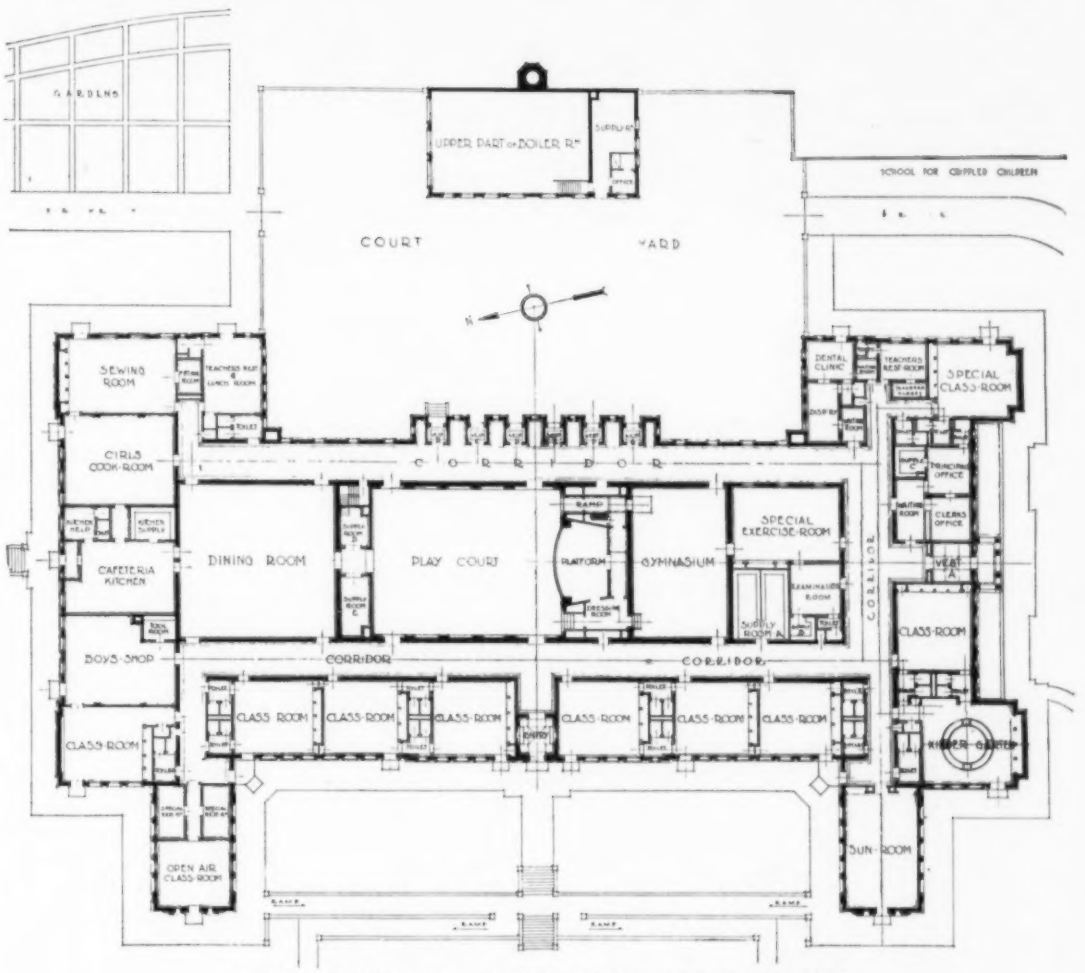
The Cleveland Sunbeam school, recently completed at a cost of $470,000, well may be said to serve as a model school for the entire country for the education of crippled children. In construction, arrangement, and equipment the Sunbeam school, which was formally placed in use last fall, offers every facility for the physical and mental training of crippled children. It was built to accommodate approximately 200 pupils.

The building is of the one story type, 250 feet by 120 feet, with a clere-story 72 feet by 30 feet which covers a play court and gymnasium in the central portion of the structure.

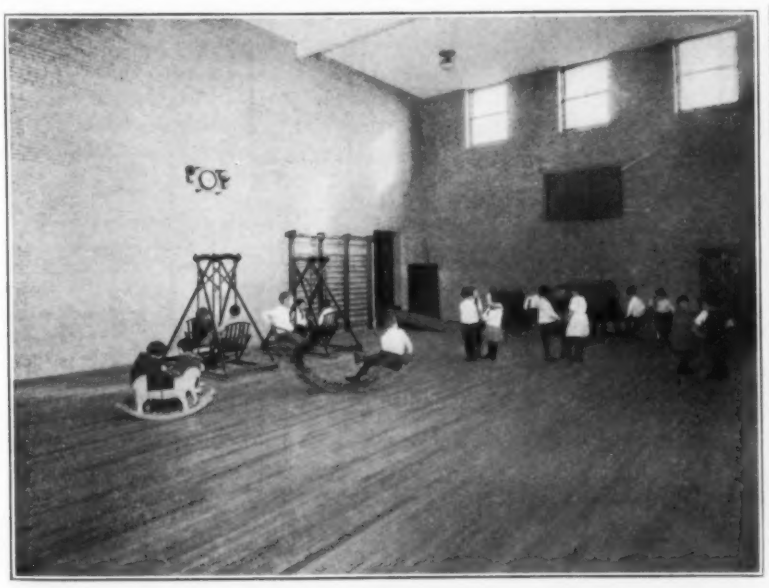
The building is of colonial design and of fireproof construction—brick and concrete with stone trimmings. Located atop a knoll which overlooks portions of the city's beautiful park system, the Sunbeam school has a commanding and attractive setting. In addition to having access to the public park grounds, the pupils also may utilize play areas located both in the front and in the rear of the school building.

In designing the building the needs of the crippled children were kept constantly in mind, with the result that the completed structure offers an example of convenience, utility, and comfort, probably unequaled by any other school of its kind.

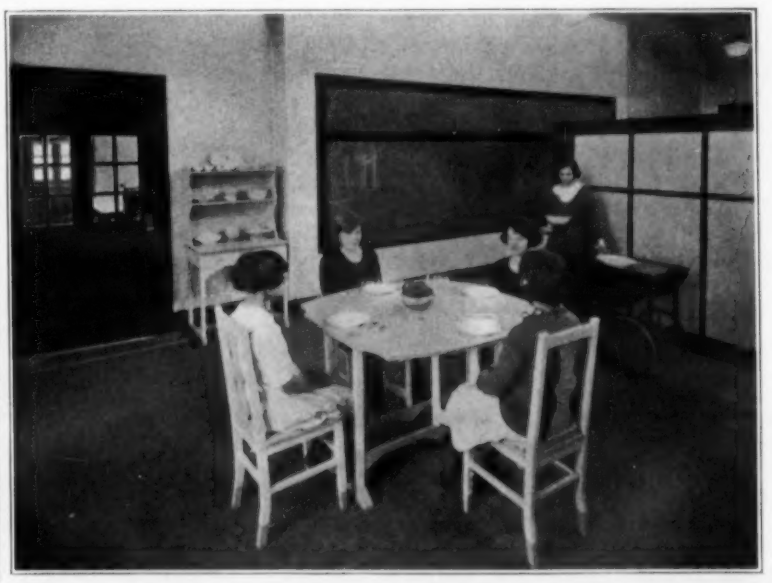
The crippled boys and girls who are attending the Sunbeam school are brought to the building in busses owned and operated by the board of education. Each bus, as it arrives at the building, is backed up to one of the series of vestibules in the rear. The floor levels of the bus and of the vestibule are identical, thus eliminating all difficulty in transferring pupils from the bus to the building. Inasmuch as many of the pupils must use wheel chairs or



FLOOR PLAN OF THE SUNBEAM SCHOOL, CLEVELAND, OHIO.
W. R. MacCornack, Architect of the Board of Education.



GYMNASIUM.



DINING ROOM IN HOME ECONOMICS SUITE.

KINDERGARTEN—SUNBEAM SCHOOL FOR CRIPPLED CHILDREN, CLEVELAND, OHIO.

crutches, the convenience of this feature is obvious. Also it provides insurance against the many injuries which are likely to befall cripples who must make use of stairways. There are, indeed, no stairways in the Sunbeam school. Ramps are used instead of stairs wherever there is any change of level.

All doors in the classrooms and other rooms are made four feet six inches wide to accommodate the chairs. The width of doors in the ordinary public school is three feet.

All of the corridors and some of the rooms have rubber floors which not only assure a larger amount of safety for children but also make for more quiet.

Separate toilets for boys and girls are connected with every classroom.

A sun room is provided for pupils who must take a rest period during the school day, and there is an open-air classroom for tubercular pupils, the percentage of which among crippled children is high. For emergency cases two special rest rooms are provided.

The physical conditions of many of the pupils of this school for crippled children is such that they require special medical attention. A dental clinic, a dispensary, and a physical examination room are provided. Roofed by the clerestory are the play courts and the gymnasium. The play court has maple flooring and is provided with a stage and a small balcony so that it serves also for auditorium purposes. The balcony at the rear of the court will accommodate one hundred visitors, while portable chairs are placed in the court for teachers and pupils when it is used as an auditorium.

The gymnasium is provided with apparatus, not unlike that used by the normal child except that it is more limited in its scope. Swings of various kinds prove most popular with the pupils. This room is used for corrective posture exercises, simple gymnastics and games.

The home economics department has a suite of rooms consisting of a dining room, kitchen, bed room, and living room. These have been provided with simple but artistically correct furnishings and provide a laboratory for the girls taking home economics.

Pupils are served with lunch in a cafeteria which is equipped with special features to provide comforts for them.

The Sunbeam school contains a kindergarten, for the school's curriculum provides kindergarten instruction. Special care was taken to make this room attractive and it is indeed the sunniest, most cheerful spot in the building.

No standard type of desks or chairs was selected for Sunbeam. On the contrary, the classrooms reveal a wide variety in types of seats and desks to accommodate the individual needs of the children.

The school's boiler plant is housed in a special building in the rear, and all main pipes and ducts are carried to the main building in a subway.

The history of the Sunbeam school is, like almost all such movements, a story of the efforts of a group of people who realized the need of such an institution in Cleveland. Sunbeam Circle, an organization composed of Cleveland women, who had been interested for some years in the welfare of crippled children, is responsible for the beginning of the movement. At first the members of Sunbeam Circle, with money raised through the sale of handiwork, purchased braces and other orthopedic supplies as well as toys and books for crippled children of the city. In 1900, through the efforts of the Circle, the first kindergarten for crippled children was established at Alta Settlement House. A year later the Circle was instrumental in starting at Goodrich Settlement House a school, attended by crippled children. In 1910 the Cleveland board of education took over the work the foundation of which was laid so well by the Sunbeam Circle. In that year 63 pupils were enrolled in the special school for crippled children. This school occupied a one-story frame building, designed particularly for its purpose.

From 1910 to 1922 the enrollment of the school doubled and the frame building became inadequate. The continued interest of the Sunbeam Circle was largely responsible for the erection of the new Sunbeam School which is being dedicated to the service of the children in need of its help.

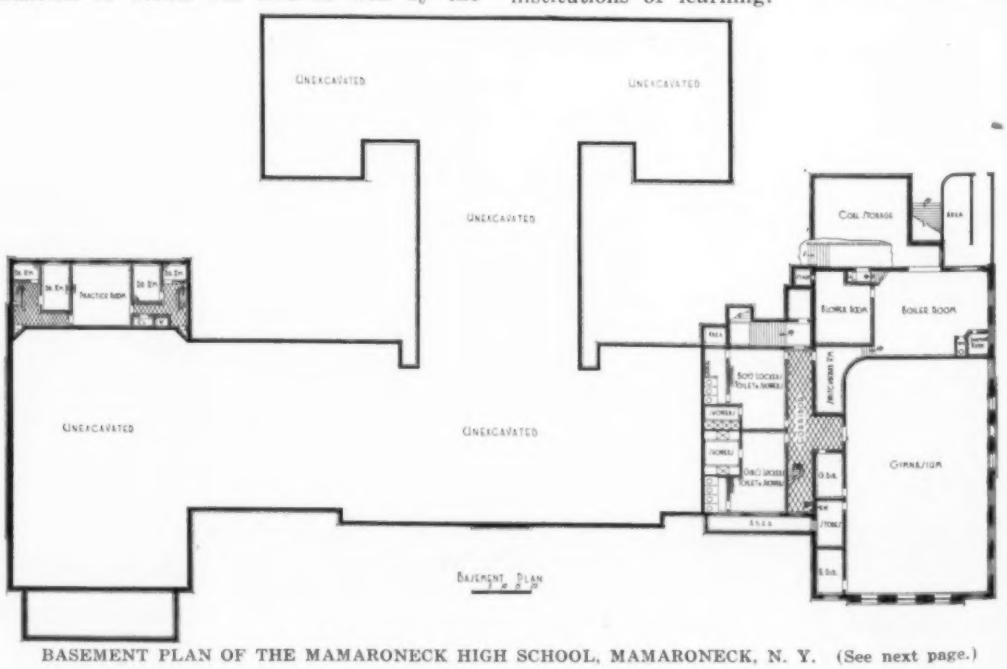
In 1922-23 the cost per pupil in Sunbeam school was $350.10. This is exclusive of general control, maintenance, operation, and capital outlay. The cost of a normal pupil's instruction for corresponding items is $60.19. Included in the cost of crippled children's education is transportation by bus and free lunches. The state of Ohio provides for excess cost of educating crippled children up to $300 per pupil on a thirty-six weeks' basis so that on the basis of 38 weeks the total cost per pupil collected from the state may be $316.17.

There are 176 pupils enrolled at Sunbeam this year. There were 117 last year. This, of course, does not indicate an increase in the number of crippled children enrolled in the Cleveland schools but merely the placing of more children at Sunbeam.

It is no part of the Sunbeam plan, however, to house all the crippled children in the city school district. On the contrary, the school aims to offer an education such as will permit its pupils to find their places in the regular schools as soon as their physical condition permits. It offers no work above that of the elementary grades. Many former Sunbeam children have made admirable records in the high schools.

—Supt. William McAndrew of Chicago has in preparation a school building program which is intended to cover the housing needs for the next ten years and to provide immediate relief for the 54,000 children now housed in portable buildings. With this end in view, Supt. McAndrew has completed a census of the regions where school facilities have been outgrown and these will be given immediate attention under the proposed program of construction. Supt. McAndrew points out that a comprehensive long term program is necessary in order to afford relief for the present congested condition. The normal increase yearly of school children has been estimated as near 20,000 and new buildings in process of completion will accommodate only about 18,000 pupils.

—Silsbee, Tex. An eight-room addition has been erected. The entire seven-acre site has been planted with shade trees and a cafeteria has been opened. About $200 in books has been expended for the library. The school system has doubled in enrollment in the last five years and has become affiliated with the higher state institutions of learning.



BASEMENT PLAN OF THE MAMARONECK HIGH SCHOOL, MAMARONECK, N. Y. (See next page.)

MAMARONECK HIGH SCHOOL,
MAMARONECK, N. Y.

Edward Hahn, Architect, Hempstead, N. Y.
C. B. J. Snyder, F. A. I. A., Consultant, New York, N. Y.

THE MAMARONECK HIGH SCHOOL

From time to time it would appear that the school authorities of some of the smaller communities have, after all, rather more difficult problems to solve than some of their city brethren. And especially is this so when the problem has to do with the providing of facilities for secondary education where the school district embraces at least two municipalities, neither with sufficient school population to require a high school building with all facilities strictly within its own limits, yet each having its Mayor and other officials.

Such an instance is that of the school district of Mamaroneck, N. Y., of which Joseph F. Gleason is president, and Mr. William Boothby superintendent of schools, and which includes the village of Mamaroneck as also that of Larchmont-on-the-Sound, both within easy commuting distance of New York City, with a steady growth in population of the most desirable sort.

A site, centrally located, and consisting of about 12 acres in every way suitable for school use was finally secured and contracts have been let for the construction and equipment of a building at a total cost of about $500,000.

The site contains 12.18 acres of land with a street frontage of 300 feet. The athletic field will have a width of 500 feet. The design of the building is simple yet impressive. The colonial style is effected. The plan of the building is a modified open E type.

The offices of the board of education and the superintendent are located near the main entrance in the central part of the building. The gymnasium is placed on one side and the auditorium on the other. The general plans provide for 16 classrooms and 8 recitation rooms. In addition to these rooms there are two libraries and two study rooms. There is also a music room and a commercial department for bookkeeping, stenography, and typewriting with a room for each. Spaces will be apportioned for the pursuit of the mechanic arts.

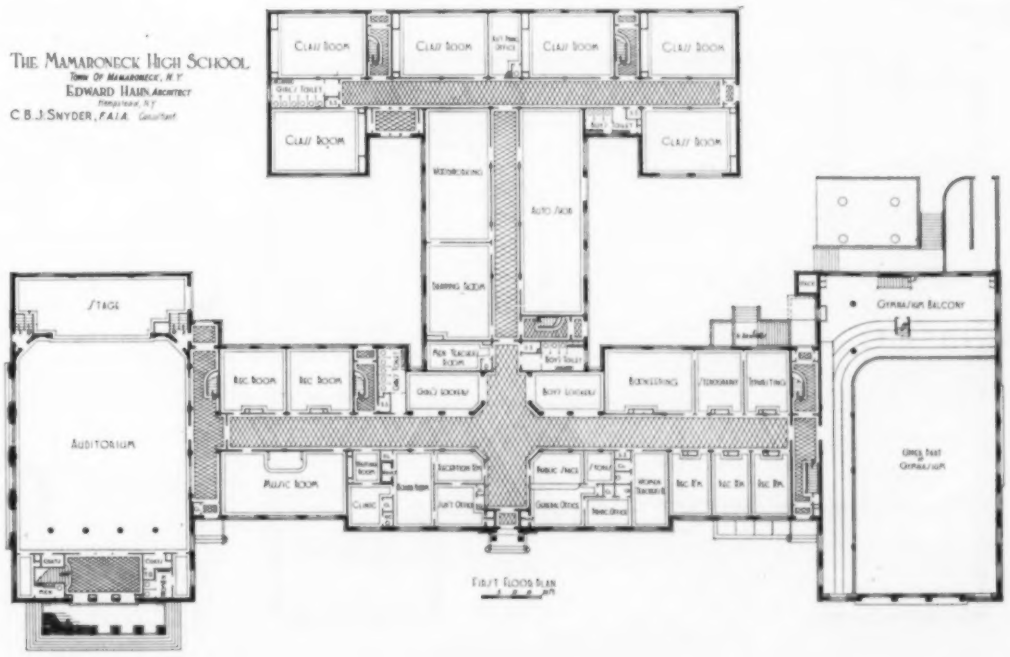
Home economics will be taught in a large laboratory-like kitchen. The cafeteria, which will seat 175 persons at one time, adjoins the kitchen. Laboratories for biology, physics, and chemistry, together with a lecture room, form a separate unit.

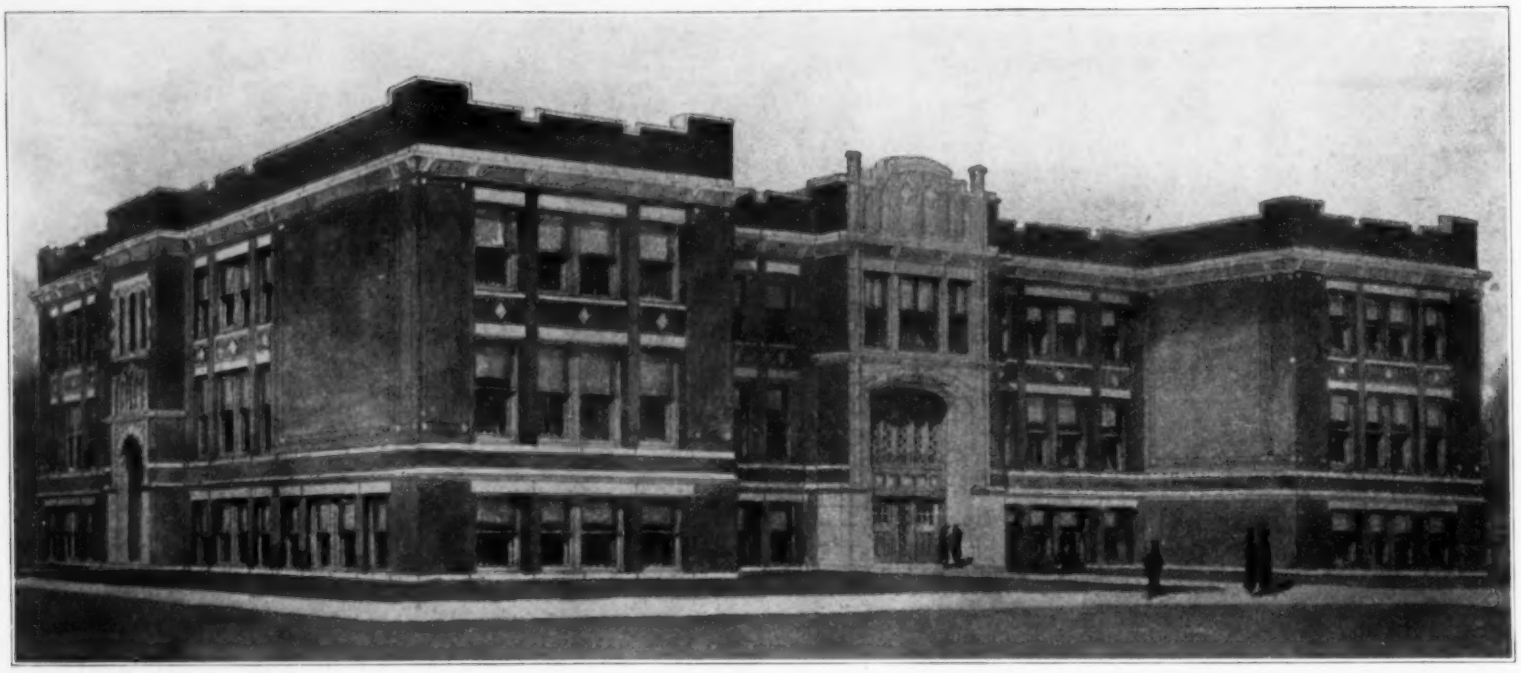
The auditorium will seat 1,000 persons and is arranged to serve community use as well as school use. The seating on the main arena will accommodate 700 and the gallery 300 persons. Every care has been exercised to afford safe exits as well as to render the hall conveniently accessible to the general public and to the student body. A motion picture booth is provided.

The gymnasium has an unobstructed floor space of 50 by 80 feet and a ceiling height of 22 feet. A gallery is provided at one end seating about 300 persons. Locker, toilet, and shower rooms are provided on the same level with the gymnasium.

The completion of the school will permit of the bringing together of the high school pupils of the entire district and the organization of a junior high school, which together will do a very great deal towards relieving the overcrowding of the elementary schools. Later, junior high schools will be erected in both the upper and lower portion of the school district, when the building now under contract will be only for a senior high school, provision having been made for a ready adjustment of space requirements and an increase in size and facilities to meet almost any requirement.

Edward Hahn of Hempstead, New York, is the architect; C. B. J. Snyder, who served the city of New York as school architect for thirty years, is the consulting architect and engineer.





HIGH SCHOOL, BELOIT, KANS.

Wm. H. Sayler & Co., Architects, Kansas City, Mo.

A FEW EXAMPLES OF SCHOOL BUILDINGS IN THE MIDDLE WEST

Designed by Messrs. Wm. H. Sayler & Co., Archts., Kansas City, Missouri

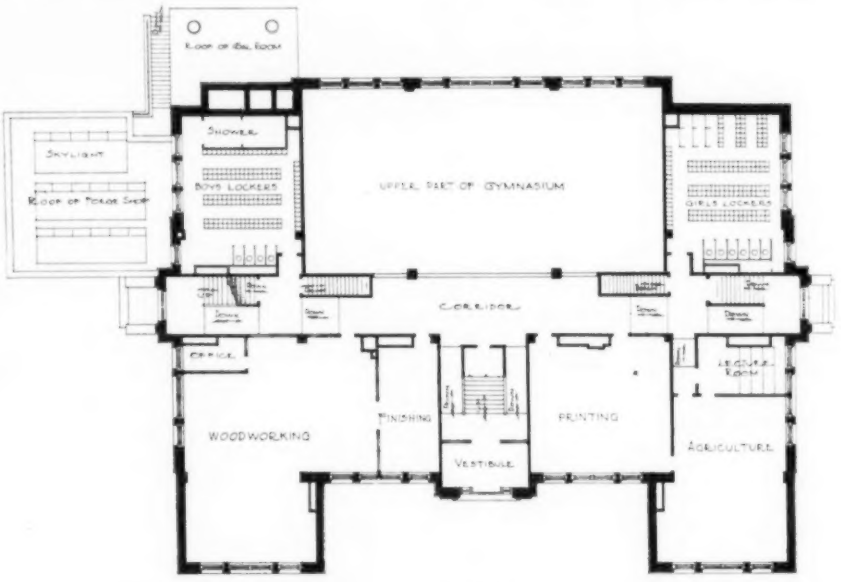
The broadening of high school education and the simultaneous development of community use of high school buildings has led to the complication of the problem of planning high school buildings in small cities. This complication has been confused further by the fact that many departments of a high school must be used for more than one purpose in order to make them economically possible. In the adjustment of space as well as the design of individual rooms the architect must keep the various uses of the space effectively in mind. An additional difficulty arises from the variety of administrative plans which are in use and which make a school building which entirely meets the needs of one town, entirely ineffective in a neighboring community.

The problem of the architect is to translate all the aims of the various departments of a school into effective building space, and to group the departments in such a way that they will be the best possible administrative unit.

The accompanying illustrations and floor plans show how one firm of architects has successfully met the problems of a number of small cities in an interesting and economical way.

The Abilene High School

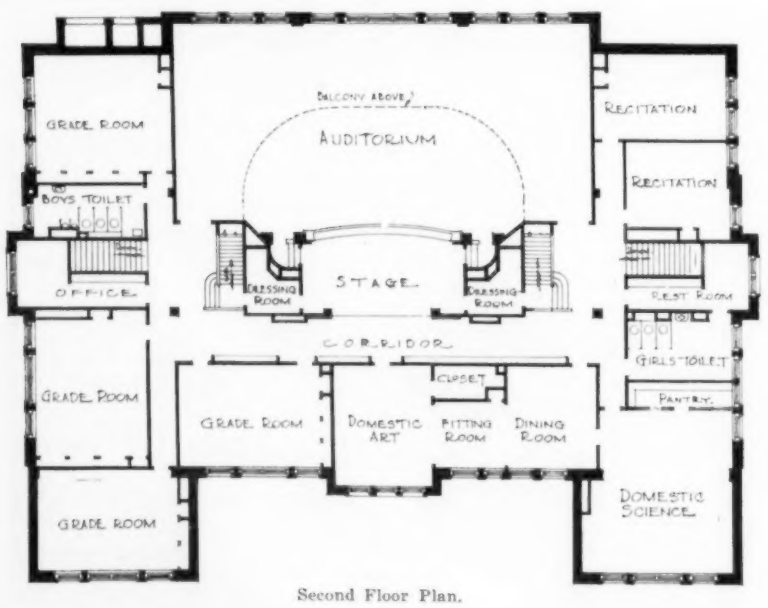
The high school at Abilene, Kansas, is a compact structure so arranged that a minimum of corridor and exit space is provided for a maximum of efficiency in circulation between the departments. The ground floor, which is sufficiently above grade to permit of full length windows, contains a gymnasium with locker and shower rooms adjoining, a shop for woodworking and wood finishing, a large forge room, a print shop, an agricultural laboratory and a small science lecture room. The gymnasium floor is placed on a level below that of the balance of the building and is accessible by means of two circular stairs and two stairways which lead to the space under the balcony.



GROUND FLOOR PLAN

The first floor contains the administrative offices of the city school system, three recitation rooms, two laboratories, a science lecture room, three rooms for the commercial department, a large study hall, and a small library.

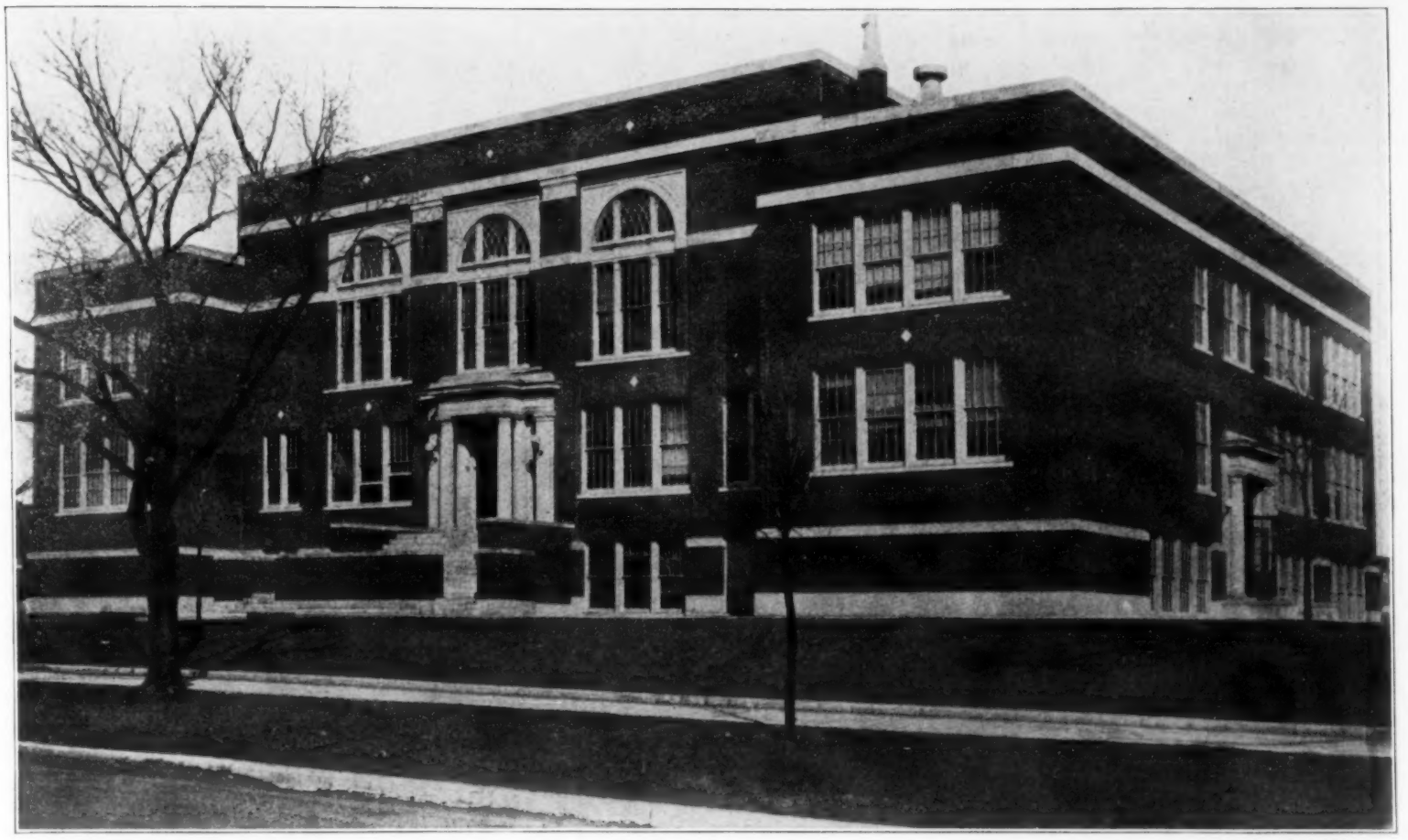
On the second floor there are six recitation rooms, a household arts group, a rest room, and toilets. The main floor of the auditorium is also accessible from the second floor corridors.



Second Floor Plan.

FIRST FLOOR PLAN

HIGH SCHOOL, BELOIT, KANS. Wm. H. Sayler & Co., Architecst.



HIGH SCHOOL, ABILENE, KANS. Wm. H. Sayler & Co., Architects, Kansas City, Mo.

The Beloit High School

The arrangement of the high school at Beloit is similar to that at Abilene, but differs from it in some important details. In the latter building the gymnasium, study room and auditorium are all in the rear of the building, and the administrative group is placed immediately adjoining the front stairway.

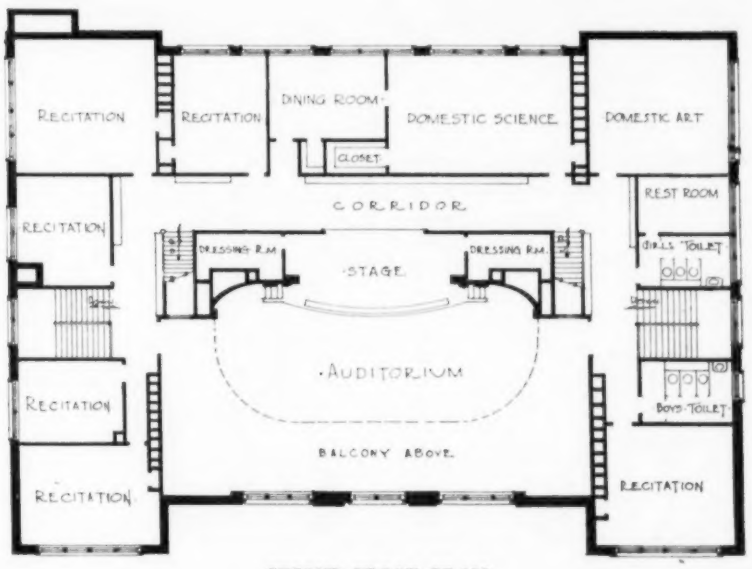
The basement of the building contains a gymnasium, a complete manual training and agricultural department, locker and shower rooms, toilets, and in an annex a forge shop.

On the first floor there are four recitation rooms, a science laboratory group, a commercial group and a large study room and library.

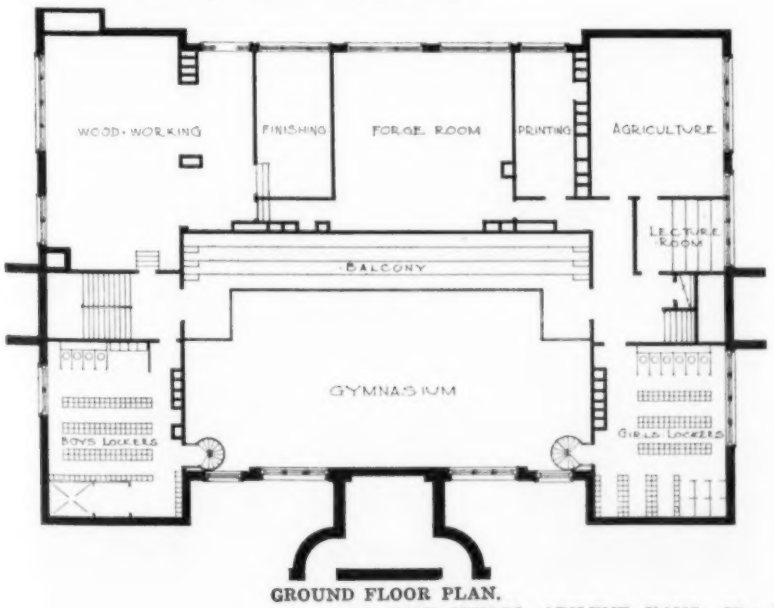
On the second floor there are four grade classrooms, two recitation rooms and a group of four rooms for household arts. The auditorium is entered from this floor and special stairways lead to the balcony.

The Roosevelt School

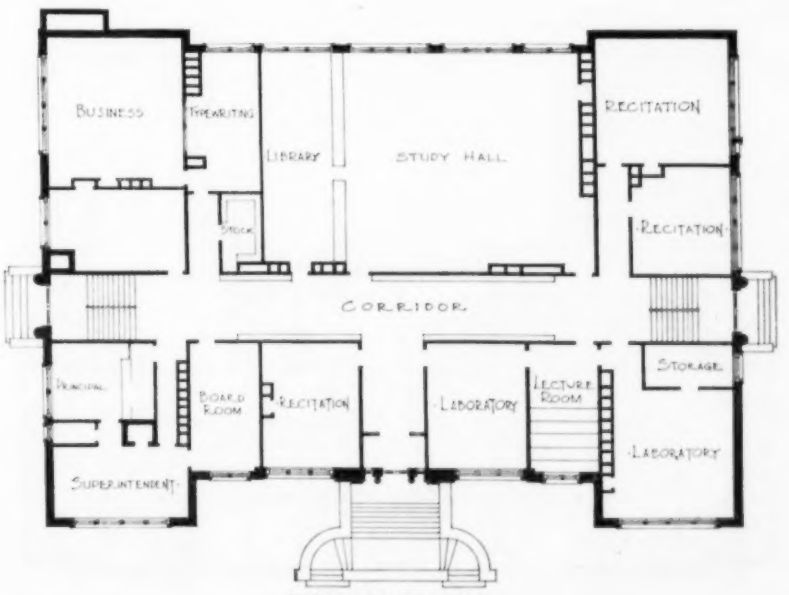
The Roosevelt school is a rather interesting solution of a special problem arising from the growth of the Atchison High School. The original building of the high school was erected in 1908, and in 1922 had grown to such propor-



SECOND FLOOR PLAN.



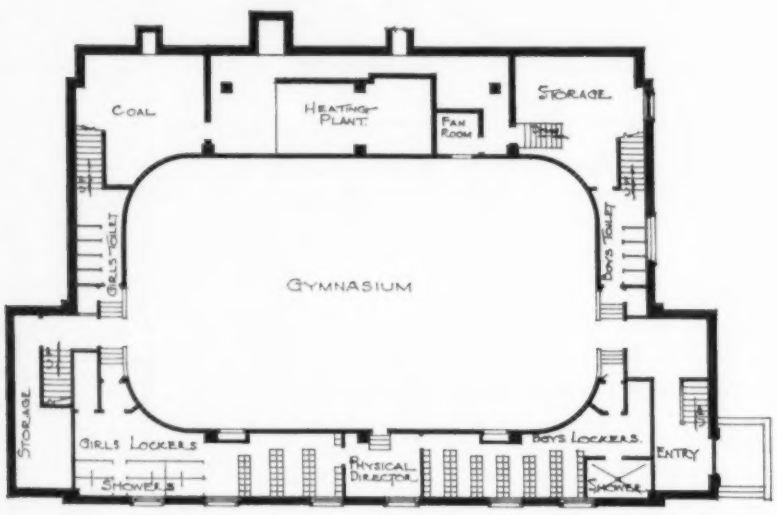
GROUND FLOOR PLAN.



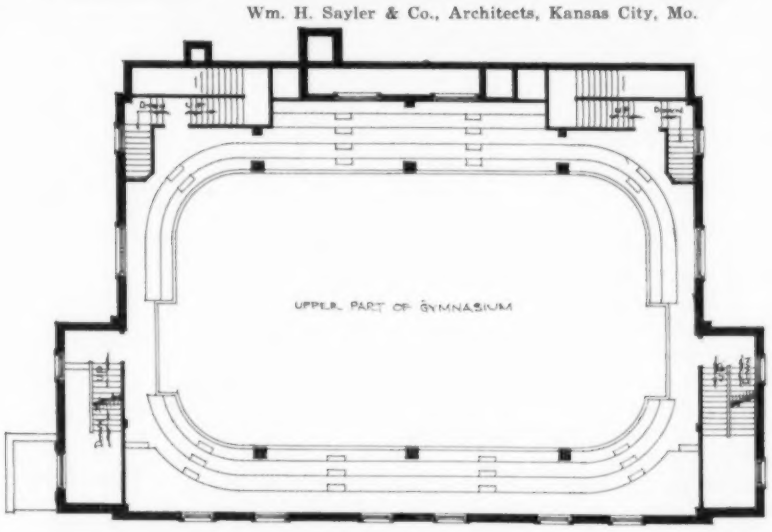
FIRST FLOOR PLAN.

HIGH SCHOOL, ABILENE, KANS. Wm. H. Sayler & Co., Architects, Kansas City, Mo.

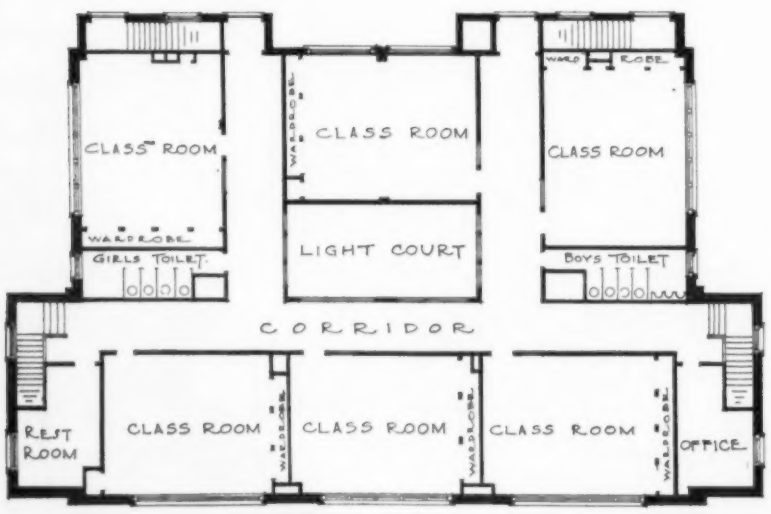
ROOSEVELT SCHOOL, ATCHISON, KANS. Wm. H. Sayler & Co., Architects, Kansas City, Mo.



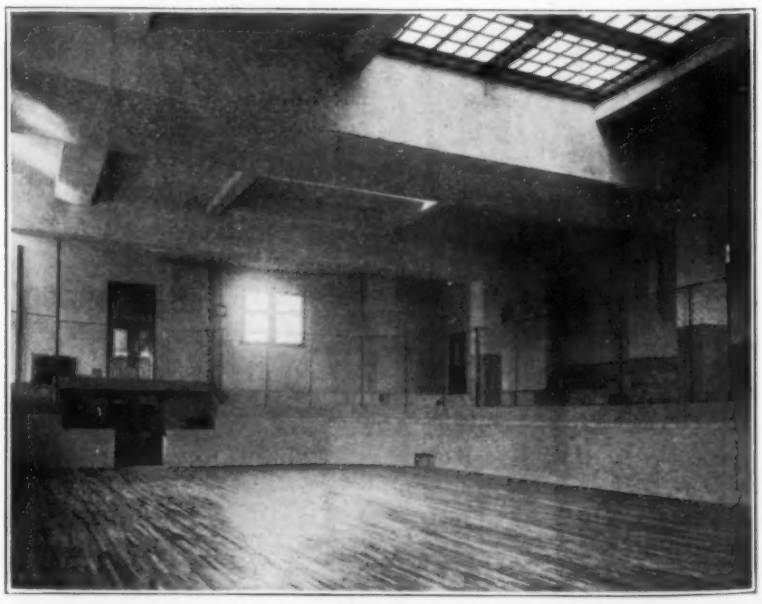
GROUND FLOOR PLAN.



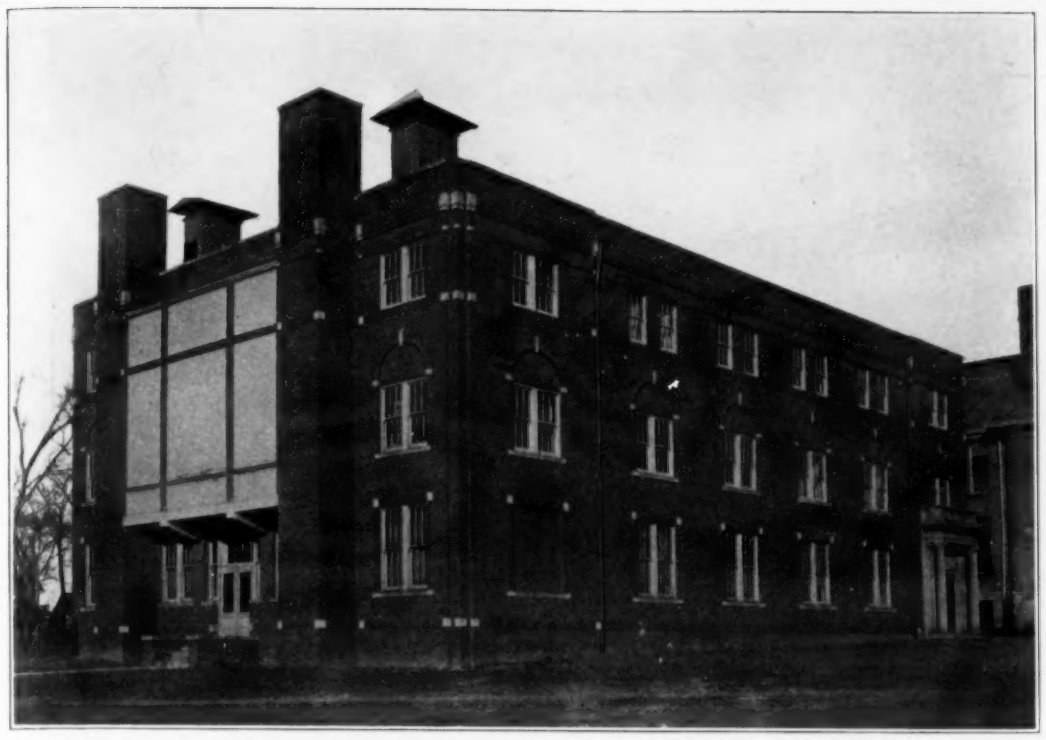
BALCONY PLAN.



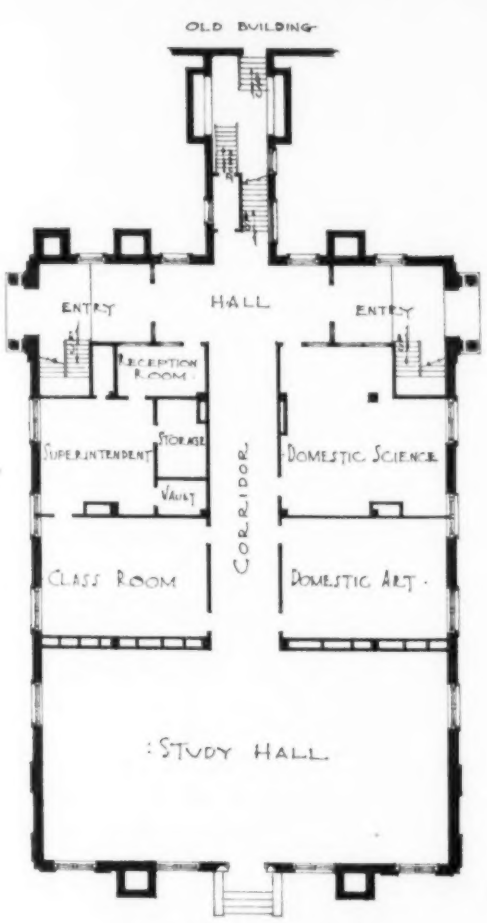
SECOND FLOOR PLAN.



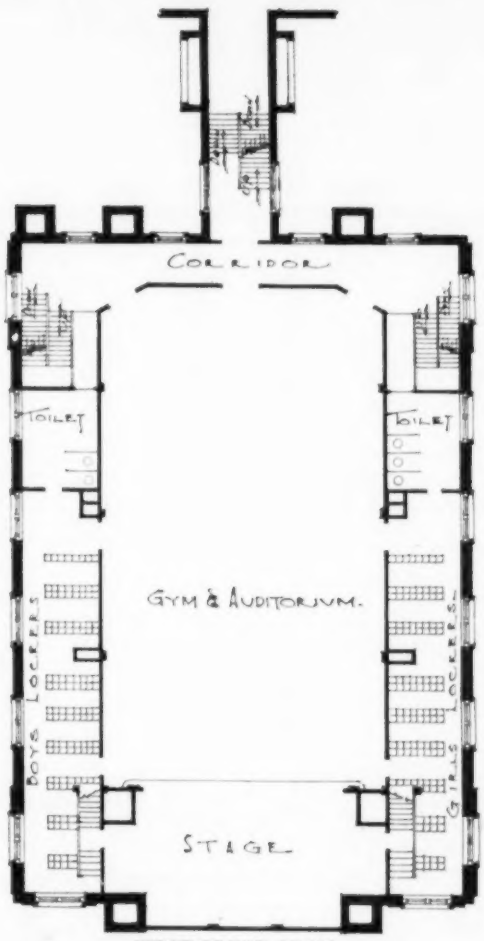
INTERIOR OF GYMNASIUM, ROOSEVELT SCHOOL, ATCHISON, KANS.
Wm. H. Sayler & Co., Architects, Kansas City, Mo.



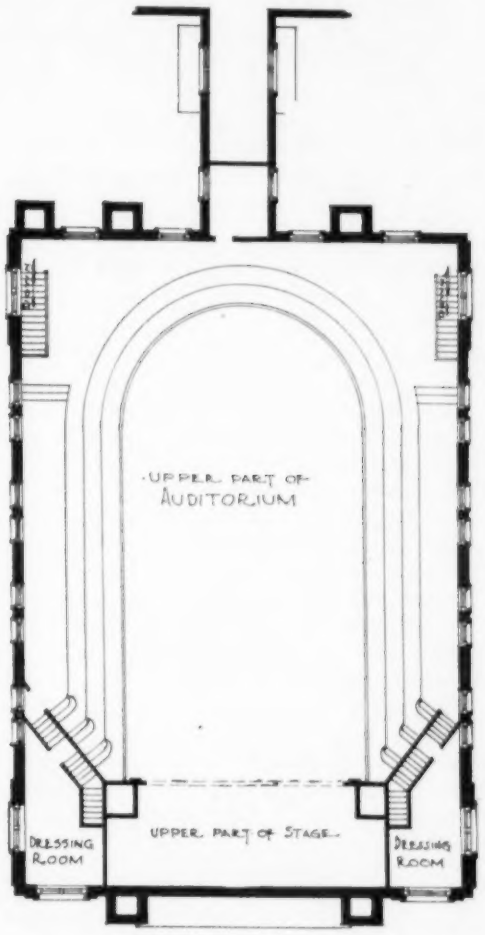
HIGH SCHOOL ANNEX, MOBERLY, MO. Wm. H. Sayler & Co., Architects, Kansas City, Mo.



GROUND FLOOR PLAN.



FIRST FLOOR PLAN.



BALCONY PLAN.

HIGH SCHOOL ANNEX, MOBERLY, MO. Wm. H. Sayler & Co., Architects, Kansas City, Mo.

tions that it was necessary to remove the grade classes and the gymnasium in order to make space for students of junior and senior high school grade. The Roosevelt school was built on the lot adjoining the high school building and provided the latter with gymnasium facilities.

The problem of this building was especially difficult due to its location. The site adjoins a high hill which made it necessary to locate the classrooms on the third floor in order to insure adequate lighting. A second problem was to furnish entrances for the grade pupils to the portion of the building restricted to their use, and to give separate entrance for the high school pupils to the gymnasium.

The floor plans show how this was accomplished. While the building is practically a three story building—the main floor of the gymnasium, the balcony, and the floor of the grade rooms—the levels of the ground are such that all three open upon the natural grades. The gymnasium floor has one entrance, the balcony at the opposite end has its own entrance, and the grade rooms have their special entrance at the rear.

The Moberly Annex

The annex to the Moberly high school represents a problem similar to that of the Roosevelt school, except for several considerations. The site is entirely flat and it was desired in planning the building, to make the first floor directly accessible to the first floor of the main building. This caused the location of the gymnasium and auditorium on the second floor as the plans indicate. The heating plant is located between the old and the new buildings and provides power for both.

The gymnasium-auditorium is so designed that it serves for school entertainments and other public assemblies equally as well as for gymnasium purposes. On the main floor removable seats are in use which are stored on rolling racks under the stage when not in use.

All of the buildings described above are constructed with exterior masonry walls, interior construction of concrete, partitions of three-inch plaster blocks, and suspended metal lath ceilings. The floors are finished with cement and are painted with a special cement floor paint. The gymnasium and manual training rooms have wood finish floors for obvious reasons. The buildings are practically fireproof and cost less than ten per cent more than second-class construction. The difference in cost is more than made up in the permanence of the structures and lower insurance rate.

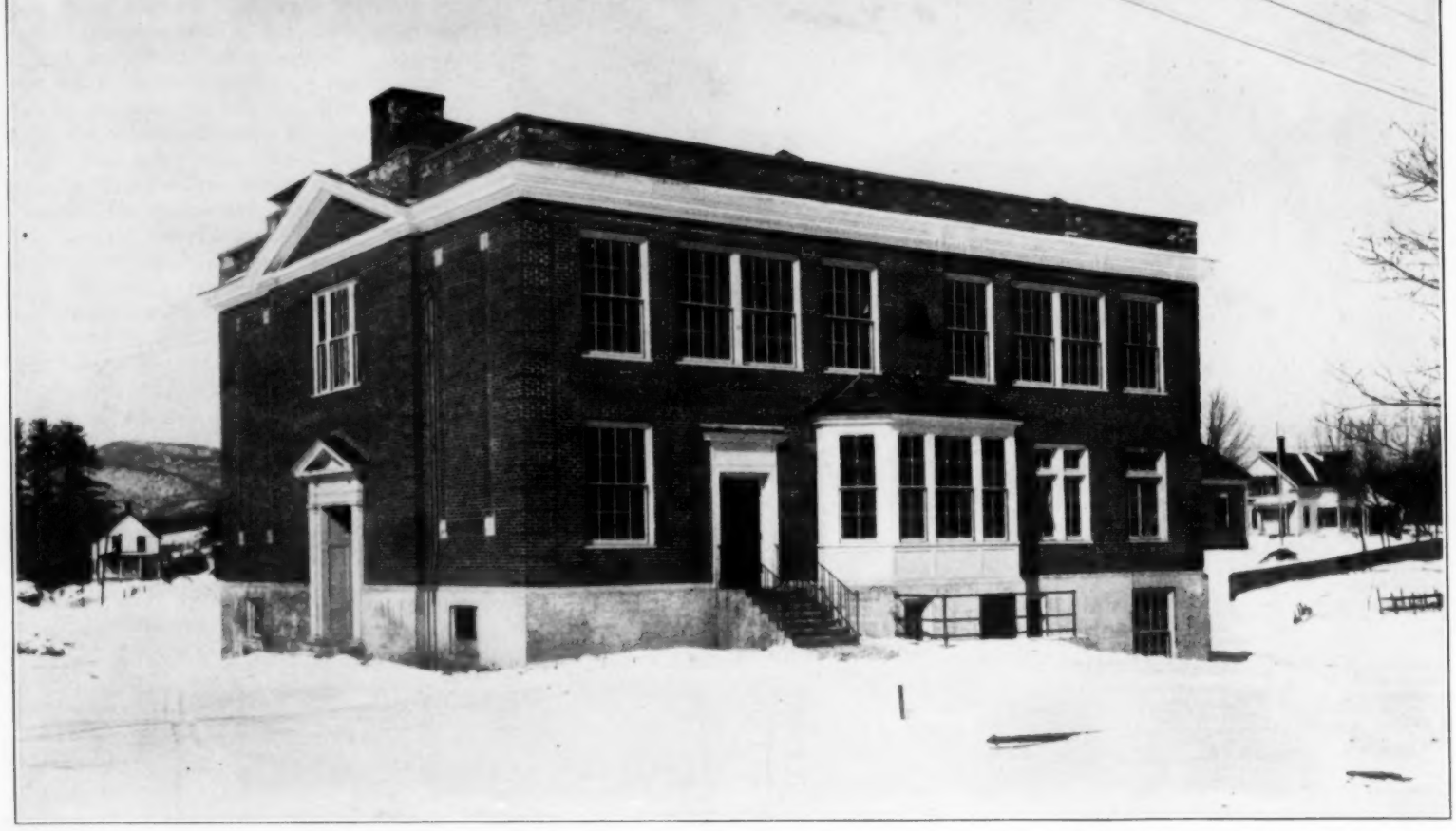
Mechanical Ventilation

The buildings above described are equipped with well designed mechanical ventilating plants. In discussing the problem of ventilation, Mr. Wm. H. Sayler well says:

"While we have designed numerous buildings in which the owners refused to consider mechanical ventilated heating plants, we believe this to be a serious mistake. In our opinion, a properly designed school building, demands a properly designed mechanical ventilating and heating plant, with automatic heat regulation, and a practical humidifier to moisten the air, just as much so as it demands proper and correct lighting, proper design from a standpoint of sanitation and the other features of special school designing. This fact, we believe, will be fully demonstrated to anyone interested in school construction, who will make a thorough investigation of the subject.

"While some owners are of the opinion that the cost of operation is much greater than a non-ventilated system, this need not be the case, for if proper apparatus is used, with efficient automatic regulation and correct construction for re-circulation of air, installed for use when conditions are such as to justify re-circulation of air, that is, when the building is being heated

(Concluded on Page 107)



WEST TERRACE SCHOOL, CLAREMONT, N. H. Brainerd & Leeds, Architects, Boston, Mass.

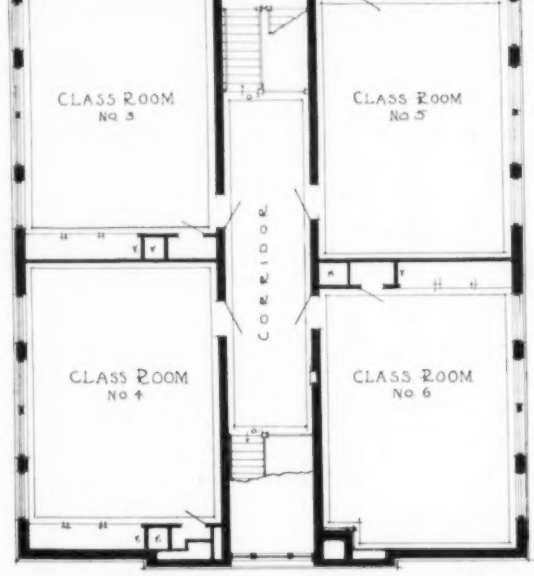
THE WEST TERRACE SCHOOL

The West Terrace School at Claremont, New Hampshire, has been planned to meet the needs of a slowly growing community for a primary building, and the town is justly proud of the building, which was occupied in the fall of 1923.

The building contains six primary classrooms for 35 pupils each, a double-room kindergarten for 50 pupils, a total of 260 pupils. The play-room-assembly hall will seat 240 persons.

The boiler room and chimney have been planned for the setting of a second boiler. This will provide sufficient space for six more class-rooms which may be added at the rear. The only change in the present building is the re-building of the rear stairs at the end of the extended corridors.

The pupils' toilets are on the ground floor. The office, teachers' room and teachers' toilet are on the first floor. The building is heated by direct radiation and has positive ventilation by means of a fan supplying warm air.



SECOND FLOOR PLAN.

The cost of the building was as follows:

General contract	$39,550
Plumbing	2,344
Heating and ventilation	8,163
Electric equipment	1,325
Total	$51,382

In planning the building, the architects offered the school committee an alternate design involving a hipped roof and a cupola of the type found on old New England academies. The alternate plan also called for first-class construction in the entire basement, first floor, stairs, for raising the first floor three feet and for the use of cast stone exterior trim below the cornice. The bids showed an increase for the general contract of $47,700, and $2,500 for the roof. This additional cost was deemed unwise and the original plans were carried out as shown.

The building was designed by Messrs. Brainerd & Leeds of Boston, and was erected under their supervision.

BASEMENT PLAN.

FIRST FLOOR PLAN.

WEST TERRACE SCHOOL, CLAREMONT, N. H. Brainerd & Leeds, Architects, Boston, Mass.

"Units of Cost" and Their Application

John L. Lounsbury, Principal of Burnett School, Long Beach, Calif.

This article is written in an effort to make a practical application of some of the principles and theories as set forth in a former article in the JOURNAL, entitled "Principles of Classification and Unit Cost in School Finance." The previous discussion dealt with the problem and principles of analyzing school costs. This article will deal with the application of "units of costs" to an analysis of school expenditure. Both are interdependent. We cannot devise "units" of cost unless school expenditures are analyzed, and on the other hand, our analysis will be comparatively worthless unless we devise some terminology whereby we can speak of this analysis with a common understanding.

The analyses of school costs are necessary to show just what items of expenditure make up any unit that might be devised. It is comparatively simple to record the items of expenditure as they come in, without any reference to the function they perform, but to charge them with respect to the duties performed necessitates a study of the various phases of the school system. The scientific analysis of the school's accounts which recognizes the organization and purpose of that school system, and charges each item with respect to its function, must therefore show just what items make up any "unit" devised and give the fundamental basis for including those items as part of that unit.

Any unit devised as a basis of terminology must in turn be made with reference to the items included in the analysis. But the analysis is made with reference to the relationship that exists between the various items of expenditure. This relationship is the vital question in school accounting. Therefore, it can easily be seen that cost analysis and unit costs are interdependent and that any unit of cost used must be able to express the same relationship between the various functions of expenditure as shown by the analysis. What the analysis shows regarding the school expenditures, any unit used to express that analysis must also show.

In securing "units" of cost we must pattern to some extent after the practices of the commercial world, but the purposes of our expenditures are different than in the commercial and industrial fields. We cannot devise "units" which will deal with the "value of the product" and they must, therefore, deal with the process costs. The large element of human differences which affects school costs cannot be measured objectively, but we must seek a comparative basis whereby a certain cost for the labor or duty performed or for the materials consumed in one school are comparable with the same kind of labor or duty or materials consumed in another school.

One of the fundamental principles that must be taken into consideration in constructing various "units" is the relationship that exists between "prime costs" and "overhead costs." In computing the cost of education in any school system, instruction can be considered as a prime cost because instruction is basic. Education exists as an institution for instructional purposes. Instruction makes up the largest percentage of our expenditure. All other processes bear an indirect relationship to instruction. We are, therefore, safe in assuming that instruction is a prime cost, just as labor is a prime cost in manufacturing; in fact when we buy instruction we pay for labor. Our final unit must, therefore, be on the basis of "instruction" plus all accessory costs.

Our problem is to devise "units" which will measure instructional costs and overhead costs in their proper relationship. Instructional costs must be measured in "units" that show the function of that process, and overhead costs must be measured in "units" that show their function as well as the relationship to instruction. The rest of this article will be devoted to the practical application of such a theory to an actual school situation. It is impossible to inform readers where these figures were obtained, but they are taken from the actual cost of a school system for the year 1920-21.

Perhaps the most common unit of cost for estimating the cost of the elementary school is, "cost per pupil in average daily attendance." This unit concentrates all cost, to use the common expression of the industrial accountant, at the point of the tool; or in other words, each pupil is considered as an individual unit, and the costs, both direct and indirect, are centered here. This unit is based on the principle that indirect expenses accrue in proportion to the number of pupils in school each day. When we figure the pupils in average daily attendance, our unit remains constant for one day, and each pupil is like every other pupil in the amount of time, floor space, and supplies consumed.

In determining the cost "per pupil in average daily attendance" the cost for instruction, administration, operation, maintenance and that part of outlays which represents the yearly depreciation, are computed and the total costs divided by the number in average daily attendance. If the "cost per pupil in average daily attendance" for any one building, room or grade within a building, were desired, the cost would be determined by adding the cost of instruction for that particular division, to the prorated share of administration, operation, maintenance, and outlays for that particular building, room or grade, and the whole divided by the number of pupils "in average daily attendance" in that building, room or grade.

The cost for one particular grade building for the year 1920-21, thus computed, was:

Administration	$ 2,033.73
Instruction	31,622.49
Operation	6,085.08
Maintenance	1,087.83
Outlays	171.69
Total	$40,000.81

The number of pupils in average daily attendance was 450, making the "cost per pupil in average daily attendance" $88.88.

We know, however, that there was 484 pupils enrolled in this school. The cost remained the same regardless of the average daily attendance because the school plant was in operation and the same expenses were going on.

The same cost will hold good regardless of the unit used to express that cost. If we had used "the number enrolled" as the unit of cost the result would have been $40,000.81 divided by 484, or $82.68. This shows clearly that the unit "cost per pupil, in average daily attendance" does not take into consideration the cost incurred through the absence of any one pupil. The building is equipped with respect to the number expected rather than with respect to the number that actually attends. We are not measuring results, but the organization calls for a certain expense, which will remain relatively constant regardless of attendance.

But let us carry these two units which are so nearly alike down to a finer division of the process. We should see what the difference is in the cost when we take one grade or room within the building. Computing the cost of the various processes in the second grade of the same building, whose total cost was computed before, we found the cost to be:

Administration	$ 140.28
Instruction	1,934.54
Operation	683.16
Maintenance	64.29
Total	$2,822.27

There were 28 pupils enrolled in this grade with an average daily attendance of 25. Taking the number enrolled as the divisor we find the cost "per pupil enrolled" was $100.79 and taking the average daily attendance as the divisor we find the cost "per pupil in average daily attendance" was $112.88.

Two facts are brought to light. First, lack of constancy in attendance or enrollment becomes an important factor in influencing costs as well as the items that enter into the makeup of costs. Second, "cost per pupil enrolled" is a better basis for estimating costs than "cost per pupil in average daily attendance" because our purpose is to reveal the actual cost of operation and not what the school turns out.

When we used the entire building as a division, the cost per pupil in average daily attendance was just $6.20 more than the cost per pupil enrolled. When we used the grade as a division we found that the difference in costs was $12.09, or almost twice as much. This, of course, would vary with the different rooms because of the difference in enrollment and attendance. Immediately the question arises, "Why does the cost per pupil enrolled vary between one room and the whole building? It will be noted that the cost per pupil enrolled for the whole building was $82.68, while the cost for this same unit for the one room was $100.79, a large difference when this room was considered average for the building. It is easy to see that our cost is entirely governed by the teaching load imposed upon the teacher. If one teacher teaches 28 pupils, the cost per pupil would be $100.79; while, if she teaches 35 pupils, the cost per pupil would be $80.63, or almost $20 less.

The application of these "two units" is given to illustrate the differences that may appear in results if these units are used. The writer does not consider them adequate or conforming to the theory advocated before, but they can be used to an advantage by the school administrator. It might not be necessary to make such small divisions as have been used here, but to economically administer a school system, those responsible should be able to determine comparative costs for buildings, grades, and classes for making adjustments. One school system familiar to the writer has required that each week a report of attendance and enrollment be completed so that proper adjustments can be made at all times of the teaching load and expenses.

Another "unit" of cost which might be applied to elementary school costs is "cost per subject." This requires the computation of the total cost per room and using the proportionate amount of time spent on one subject as the divisor, to compute the cost per subject. This does not seem to be a practicable unit for comparing one school with another, but it will prove very useful to the administrator in comparing relative costs within the system. That is, how much does it cost to teach arithmetic in the sixth grade of this building as compared with the cost of teaching arithmetic in the same grade of another building? Going back to our former computed costs for one room as given above and assuming that the sixth grade costs approximately the same as the second, the one computed, our total cost for the one room would be $2,822.27. Suppose the teacher spends eighty minutes a day in the teaching of arith-

metic. The total length of the school day in this grade is 300 minutes. The teacher, therefore, devotes 26 per cent of her time to the teaching of arithmetic. We can, therefore, charge 26 per cent of the total cost of this room to the teaching of arithmetic which would be about $720.20. In other words it costs $720.20 to teach arithmetic in this school for the year 1920-21.

The elements that make up this unit do not fluctuate except as the actual cost items fluctuate. The actual cost depends on the amount of time spent in teaching the subject and the supplies used. The number of pupils in the class or grade does not affect the cost. It might be said, however, that the teaching load will be a factor in computing costs for individuals served. What the best teaching load is, cannot be answered by experimental evidence that will fit all cases.

But this "unit" cost per subject, in any grade, can be further used in combination with the number of pupils enrolled, and thus be made a more accurate indicator of costs. As computed before, let us assume that it costs $720.20 to teach arithmetic in the sixth grade of this particular school and that there are 30 pupils enrolled in this school. The "cost per pupil subject" would, therefore, be 1/30 of $720.20 or $24. That is, it would cost $24 per pupil to teach arithmetic in the sixth grade of this particular school. Had there been 35 pupils the cost would have been proportionately less. When the number of children enrolled or the number of children in average daily attendance fluctuates our cost would fluctuate in accordance.

It becomes evident, therefore, that whatever unit is used, attendance must be a cost factor. To compare subject costs in one building with those of another does not mean anything unless we take into consideration the number served. Which one of the units we use expressing attendance, in connection with the cost per subject, depends on our purpose. If we wished to express subject cost in terms of our organization or plan, then we would use "number enrolled" in connection with "cost per subject." If we wished to express our cost of subjects in terms of pupils actually served, then we would combine "number in average daily attendance" with "cost per subject." But as pointed out before, our purpose must be to express cost in terms of plan or organization and not what we actually turn out. Our best combination, therefore, would be "cost per pupil per subject" taking enrollment as the basis for computing the number of pupils. It should also be added that such a unit conforms strictly to the principle set forth before, that the fundamental process for which our schools exists, instruction, is taken into consideration, and the cost of instruction is computed according to the relation of one subject to another.

Units of Operation Cost

There are other units, however, that must be devised to measure other process costs. We should devise some "units" or "unit" to measure the cost of operation and the cost of maintenance. The units discussed thus far have taken into consideration operation and maintenance costs as part of instructional costs. That is not the logical way to treat such items or process costs. We cannot measure janitor service by "cost or subject," but whatever unit we do use to measure the cost of janitor service, or operation and maintenance, it must be made with reference to instructional costs and be made so that each one can be applied to whatever unit is used to measure instruction.

Many items of expenditure for operation and maintenance are dependent on the nature of the subject taught in the special room in question. For instance, a manual training room, fully equipped, would use more electricity than a regular classroom, or a cooking room would use more gas than a classroom. But such items as these can be charged directly to the individual room and then prorated as some other operation and maintenance costs must be. Either method would give a fair distribution.

The best possible unit to measure operation and maintenance would be either "cost per square foot of floor space" or "cost per cubic content." That is, a room with floor space of 620 square feet should bear that percentage of the total cost of janitor service, lights, etc., for the building equal to the ratio of the floor space of this room to the whole building. Probably heat should be measured in terms "cubic contents," but where the height of the ceiling remains constant throughout the building, floor space would be just as accurate to measure this item as cubic content. The cost of maintaining and operating the halls and stairways would have to be computed the same way as the rooms, and prorated to the cost of the various rooms affected by the halls and stairways.

The unit "cost per square foot" is especially adapted to show the relationship that exists between the cost of operation and maintenance and the cost of instruction. It can easily be reduced to instructional cost. Suppose a classroom contains 500 square feet of floor space, and there are 30 pupils enrolled in this room. This allows 16.6 square feet of floor space for each pupil. The computed cost of operation and maintenance for the whole school building was $7,172.91 with a total of 30,000 feet of floor space. This particular room would be charged with approximately ten per cent of the total cost or $717.29. When we understand that in school buildings about fifty per cent of the entire floor space is accessory, then we can add fifty per cent to each room in order to find the total cost of each room. With 500 square feet of floor space in this room, the cost per square foot would be $2.24. With an allowance of 16.6 square feet per child it would, therefore, cost $23.74 per pupil per square foot.

Let us see how valid such a unit is when we compute it by another method. Going back to our computed cost for one room we find that operation cost $690.40 and maintenance $64.29, or a total of $754.69. With thirty pupils enrolled this would make the cost, measured with the number of pupils enrolled, $25.15. Our cost computed the other way, that is, "cost per square foot," times "number of pupils enrolled" was $23.74. These last figures used as a total cost, however, included what was thought to be a proportionate share of the halls and stairways chargeable to this room, and this will account for the two dollar increase in the above figure. We can say that either way we compute the cost, the results will vary but little.

But the advantage lies in computing operation and maintenance by first computing the rate of cost per square foot and then finding this cost in relation to the number of pupils served, rather than in computing the total cost and dividing by the number of pupils enrolled. There are two reasons for this: First, it measures the function of expenditure in terms of that function which can easily be expressed in terms of other functions and relationships; secondly, it gives a comparative cost basis in terms of those things measured which will be of vital importance to the executive in estimating costs on space consumed and the amount of space necessary for each pupil.

Units of Cost for the High School

The problem of "unit costs" for the high school varies considerably from that of "unit costs" for the elementary schools. It must be pointed out that, if we are clinging to the fundamental principles of accounting as set forth before, the differences in organization between the high school and the elementary school call for a different unit of cost to be used. Operation and maintenance costs in the high school might be expressed and prorated on the same basis as in the elementary school. However, the manner of showing the relationship between operation and maintenance costs on the one hand and instructional costs on the other, would be different. Cost per square foot of floor space or cost per cubic content will apply as well to the high school in expressing expenditure for operation and maintenance, as to the elementary school.

Each room must bear its proportionate share of the cost of operation and maintenance, based on the relation to the total amount of floor space maintained. Each room must also bear its proportionate share of the cost incurred through the operation and maintenance of halls and stairways. But when we undertake to show the relationship that exists between the units used to measure these costs, either cost per square foot or cost per cubic content, and the units used to express instructional costs, whatever they might be, we are confronted with an entirely different problem due to the difference in use made of the high school rooms. Here is a high school room used only four periods per day, yet it has to be heated and cleaned just the same as if it were in use constantly. In the elementary school the "pupil load" in every room remains practically constant, but in the high school it does not.

We shall first try to discuss some of the units used to measure instructional costs in the high school and return to the discussion of the relationship between instructional costs and maintenance costs.

The high school exists to give instruction to pupils, fundamentally the same as the elementary school but after a different fashion; that is, the manner of presenting this instruction is different. Rarely does the pupil spend more than four or five periods of 40 to 45 minutes in actual recitation. The rest of the day, if he is forced to stay in school, is used for study, laboratory work, or extra-curricular activities. That is, at the end of each period there is almost a complete change of the teaching load and the use made of the rooms.

Let us examine some of the units of cost that may be used to measure instructional costs in the high school and see what they show. We may use "cost per pupil in average daily attendance" or "cost per pupil enrolled." It appears to be a safe basis to prorate administrative costs for the whole high school on the basis of number enrolled in high school as compared with the total enrollment of the entire school system. We are safe in assuming that administrative costs will increase as enrollment increases though not at the same rate. We could not prorate such costs on the basis of "hours of instruction" because hours of instruction might be increased indefinitely by increasing the teaching load and yet not increase the administrative costs. This would apply to the high school as a whole and would not be valid if we attempted to prorate administrative costs to various subjects on this basis. Here administrative costs must be prorated on the basis of "hours of instruction."

It cost $163,074.72 for instruction and administration of the high school in the same city for which figures were quoted as to the cost of one elementary school. The enrollment was 1,840, with an average daily attendance of 1,750 students. The cost per pupil in average daily attendance, for instruction and administration, was $93.18 and the cost per pupil enrolled was $88.62.

When we examine these units to measure this cost, we find they are not satisfactory. In the first place, if we used such a unit, we could not in any way relate it to the unit used to express the cost of operation and maintenance. It would be exceedingly difficult to determine

the average daily attendance or number enrolled in any one room of the high school. Second, such a unit is of no diagnostic value because it gives no accurate basis for comparison of costs between the various departments of the high school. Third, such a unit gives no cost relationship between subjects and departments, both of which are important units of high school organization. We cannot tell whether our English department is more expensive than our science department because we recognize no difference in the number taking the various subjects.

We might consider, however, "cost per pupil enrolled in each subject" as a desirable unit. Here we are confronted with the intricate problem of student program. One student might be enrolled in two English classes. Would his enrollment be counted as two or as one student? He consumes as much time and energy as two persons, yet in determining the ratio of costs it would be unfair to consider one person twice. This would throw the ratio completely out of alignment when we figure the ratio with respect to the total number of pupils enrolled in the high school.

When we speak of instructional costs in terms of "number enrolled" or "average daily attendance" even by subjects, we measure this cost with reference to the wrong function. We are measuring it in terms of the number served rather than in terms of the service given. We know that an English teacher can teach more pupils and give more instruction than a science teacher of equal ability, where laboratory work in science is considered equal to regular classroom lecture work; yet science is a more costly subject and does not serve so many pupils. We should, therefore, seek to find a unit which measures the process of instruction and which can be adjusted to the number served in the process, rather than taking the number served and adjusting it to the process.

We should seek a unit which measures cost in terms of the process of instruction. There are two possible units for this purpose, viz: "cost per hour of instruction" or "cost per thousand hours of instruction." Both units are practically identical except in extent of measurement. "Thousand hours of instruction" makes the unit larger, and in the large high schools, where many hours of instruction are given in each subject, the larger unit becomes the easier to apply. The larger unit is not so small that the prorating of overhead costs on this basis will become so minute as to be inaccurate, due to the finer divisions necessitated by the use of such a small unit as one hour of instruction.

Let us apply these units to a specific case and see if they measure the cost of instruction in its functional relationship. An analysis of cost in the school in question shows that the instructional cost for science (this included prorated administration costs) was $15,271.71. A total of 5,555 hours of instruction was given in science each week. This included the laboratory periods which were eighty minutes in length and required either the time of a regular science teacher or that of a paid laboratory assistant whose salary was included in the instructional cost. Counting forty weeks as a school year there would be a total of 222,200 hours of instruction in science during a given school year. Dividing the total cost by the number of hours of instruction given we find the cost per hour of instruction to be $.067 or $67 per thousand hours of instruction. Hours of instruction are computed as one class period for one individual. Double periods count as two hours of instruction.

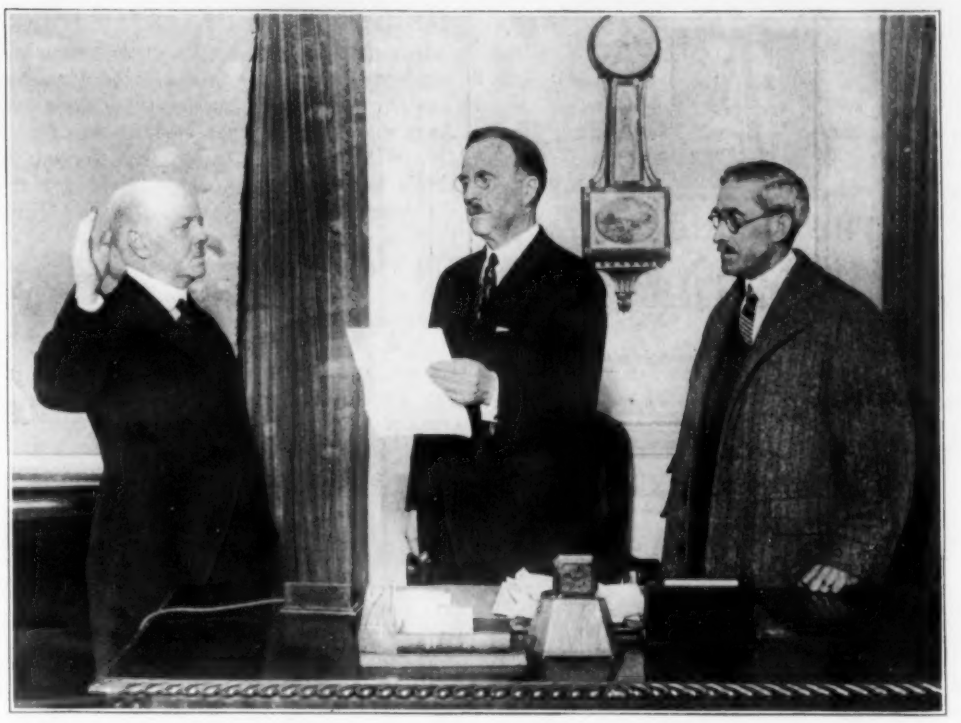
There are several points of value in measuring instructional costs in terms of "hours of instruction" or "thousand hours of instruction." First, both units take into consideration the fundamental process or purpose of the school and measure instruction as a process. Second, they take into consideration the number of pupils served because as our class increases in size they add proportionately to the hours of instruction. In this way the units can be applied to any subject with a small enrollment as well as to any subject with a large enrollment, and yet give the correct proportion of cost. Third, these two units are easily adjusted to the units used to measure the cost of operation and maintenance.

Now we must see how these units can be related to the units used to measure operation and maintenance. At the very outset we stated that the same units used to measure operation and maintenance, viz: "cost per square foot of floor space" or "cost per cubic content," could be used for the measurement of these same costs in high school.

We can easily convert the unit "hours of instruction" to the units used to measure the cost of operation and maintenance. Suppose one science room contains 1,600 square feet of floor space. In figuring costs as analyzed from our former illustration we found that the cost of the eight rooms occupied by the Science Department, maintenance and operation, was $2,028.19. The cost of one room would be one-eighth of that amount or $253.52. Since there are 1,600 square feet of floor space in this room the cost per square foot would be $.158. It now becomes an easy matter to distribute this cost to the instructional costs. In this room there are thirty recitations per week with a total of 595 hours of instruction given. In one year there would be forty times that amount of instruction, or 22,800 hours of instruction per year. Dividing 22,800 hours of instruction by 1,600 square feet we get 142 hours of instruction per square foot. If we used "thousand hours of instruction" it can be easily seen that the same underlying principle would apply but that the application would be easier and more accurate. This means that to the computed cost of 142 hours of instruction we must add $.158 to cover the cost of operation and maintenance.

But there is one other fact that we must take into consideration before we reach a definite conclusion. If the science room is so equipped as to restrict its use for recitation of other subjects than science, full time and capacity must be charged against that room for science work. This will make the cost higher for sciences and recognizes the high cost due to more elaborate equipment needed in science. Where we have an English room that may be used for history or language work, we can charge against the special subject according to the use made of the room. If it were used for history three periods and English five periods, the charges would be made in proportion to the time spent and the hours of instruction given in that room for the various subjects.

This shows that the units used to measure the cost of operation and maintenance will apply alike in all cases and can easily be converted into instructional costs. Our conclusion must be that a combination of instructional and administration costs, measured in terms of "cost per hour of instruction" or "cost per thousand hours of instruction" and operation and maintenance measured in terms of "cost per square foot" is the best possible series of units to be used.



MAYOR HYLAN SWEARS IN NEW HEAD OF THE NEW YORK CITY SCHOOLS.
Mayor John F. Hylan is shown in the center administering the oath of office to Dr. William J. O'Shea, the new Superintendent of New York City Schools. Dr. O'Shea succeeds Dr. Ettinger. (At the right is George J. Ryan, President of the Board of Education.)

DR. O'SHEA HEADS SCHOOLS OF FIRST CITY

Dr. William J. O'Shea, formerly associate superintendent of schools of New York City, on May first, assumed the duties of superintendent of the city schools, succeeding Dr. Wm. L. Ettinger.

Dr. O'Shea began his education in Public School No. 2 and completed his preliminary training at the College of the City of New York. He began his educational career as a teacher in Public School 75, Manhattan, and later became its principal. He organized Public School 171, which he headed for five years.

In 1906 Dr. O'Shea was elected a district superintendent, to serve in the boroughs of Manhattan and Brooklyn, and to have charge of cooperative and continuation school classes.

In 1918 Dr. O'Shea was promoted to the position of associate superintendent to succeed Dr. Ettinger, who had then become superintendent of schools. During the past six years Dr. O'Shea has been in charge of the elementary schools of Manhattan and has had charge of the assignment, nomination and transfer of principals and teachers and of passing upon applications for leave of absence.

Dr. O'Shea is a graduate of the College of the City of New York, and holds degrees from Manhattan College, from St. Francis Xavier's, and from Fordham University. He is the author of a series of textbooks on English, is a co-author of a work on astronomy, and a frequent contributor to educational literature. He has been active in the work of the National Education Association, the New York State Teachers' Association and the Principals' Association. He was largely responsible for the passage of the first pension bill through his work as chairman of the legislative committee of the men teachers' organization.

THE AMERICAN
School Board Journal

WM. GEO. BRUCE
WM. C. BRUCE } *Editors*

EDITORIAL

UNITS OF SCHOOL ADMINISTRATION AND INDEPENDENT CONTROL

The period when the educational forces flock to state capitals in the interest of school legislation is closing. The legislatures in several states have been in session. Here minor amendments and major revisions of the school laws have been proposed.

Among the questions which stand out with greater prominence this year are those which deal with units of school government and those affecting the relations between boards of education and municipalities in matters of financial control. Then there is the ever recurring rural school problem.

The efforts to secure a more efficient working unit for school government contemplates in the main the substitution of county for the district control. Experience has taught that a county board of education, with power to appoint the superintendent, who in turn is held responsible for the professional service rendered, renders more satisfactory results than is accomplished by the old district system. The consolidated school movement, too, has made larger units a matter of necessity.

The county unit, wherever proposed, has been met with more or less strenuous opposition. In Indiana the district trustees banded together last year and succeeded in defeating the county school government measure. The district trustee does not readily surrender his authority over the rural school located in his immediate vicinity.

And yet, in the march of progress, the various states will find that the rural school problem which concerns itself largely with the matter of effective supervision and adequate support is best dealt with through the authority and momentum of the county unit.

The county unit idea is as yet, where newly proposed, subject to perverse notions as to its real scope. In North Carolina, for instance, where the county unit has been under discussion, it is proposed that the cities be included in such unit. Those familiar with the subject know that the larger centers of population must be under separate authority and control and that such authority and control cannot consistently be shared by the smaller units.

The battle for financial control have been mainly waged in the eastern states by city boards of education that want to be ridded of city council domination. In New York state the issue assumed acute form. In Massachusetts the struggle of the larger communities, where the old town meeting system has lost its meaning, was equally strenuous. In the smaller places the town meeting idea still holds and is rendering good service.

On the whole, the school legislative measures did not pile up in the degree they did last year. There were fewer legislatures in session and the measures proposed were fewer in number.

EXIT ETTINGER—ENTER O'SHEA

During the past few months there has been much speculation as to the outcome of the New York city school superintendency situation. And when the die was cast, it was found that Dr. William L. Ettinger, who served the nation's first city as superintendent for the past six years, had been retired, and Dr. William J. O'Shea was his chosen successor.

It was known for some time that Dr. Ettinger was not entirely certain of reelection. In fact, there were rumors that he would be retired. It was known that he had offended Mayor Hylan, and it was asserted that he was *persona non grata* with Tammany Hall. But, it was not certain that these two factors would seriously oppose him.

The school forces, however, voiced their support for his reelection. A number of civic bodies as well as the several principals, teachers, and parent-teachers' organizations adopted resolutions strongly recommending his retention. His services as an educator and administrator were highly commended.

The members of the board of education, however, remained non-committal. The shadow of doubt hung over the situation until the vote was cast. No formal charges had been preferred against Dr. Ettinger, no propaganda efforts in behalf of Dr. O'Shea had become apparent. The board of education deemed it within its province to name the man, and it named him. Dr. O'Shea was the man. That was all there was to the whole transaction.

Not until the choice had been made did any intimation of the inner story reach the public. A prominent member of the board asserted that Dr. Ettinger had secured every advancement in the school system through political manipulation. This Dr. Ettinger denied in positive language. Whether the school public will ever bring the whole truth to the surface remains to be seen.

Time, too, will tell whether the change was a wise one. The case is one where an old maxim may be given a new version, namely, that the schoolmaster proposes, and the school board disposes. It is evident that the strong support which Dr. Ettinger enjoyed at the hands of his co-workers availed him nothing. The board of education acted upon its own judgment.

RECENT CHAMBER OF COMMERCE CONCERN IN PUBLIC SCHOOLS

The business public has in recent years manifested a greater concern than ever before in the progress of popular education. A number of instances have come to light where commerce bodies have engaged in untangling local school troubles or where they have in a cooperative sense provided school surveys.

These departures on the part of business organizations have in nowise been deemed meddlesome or intrusive. Conditions may arise in any community where school policies or projects may be hung up as the result of factorial differences or other deterring influences—when an impartial study and conclusion may prove most beneficent.

If a chamber of commerce is all that it ought to be, namely, a body of business and professional men, who are not dominated by political considerations and who are unselfishly concerned in the welfare of an entire community, then it may at times be of incalculable service. As a rule, bodies of this character represent the larger taxpayers who usually have a determining voice on questions affecting school support.

When the chamber of commerce at Indianapolis early in the year investigated a school squabble of long standing its findings tended to clarify the atmosphere. The public at least believed that the truth of the situation had been ascertained.

The Chicago Association of Commerce recently caused study of the school situation of Chicago to be made. It employed expert service which brought out the essential facts and problems of that city's school system and presented these to the business public. There was no effort to argue for any particular change or reform, but merely to inform the public, from the standpoint of the business man, of the status of the schools.

The Chamber of Commerce of the United States has issued a series of monographs on school administrative problems, such as housing, finances, etc., etc. It has also ventured to analyze national legislation affecting school interests.

Whatever may be said of the ultimate value of the application of collective business judgment on school administrative problems it reasonably follows such judgment is likely to be free from the more immediate considerations which so frequently hamper a board of education. The latter may get wedged into a series of complications which may render an impartial dictum most beneficent.

On the whole, the interest manifested by business men's organizations in the cause of education must be welcomed, more specially at a time when school costs have been mounting and when a more liberal tax yield is essential to provide adequate compensation for the professional workers and to maintain high standards of efficiency.

LOCAL PATRIOTISM AND PRACTICAL SCHOOL ADMINISTRATION

The pride which men profess in their country is best expressed in the contribution they may make to the progress and welfare of the community in which they live. Here the test of true citizenship primarily comes into play. The citizen who is loyal to the home town may be relied upon when the interests of the nation are at stake.

There is perhaps no place within the range of community activities which offer a finer opportunity for unselfish and patriotic service than is offered in the field of school administration. And yet how frequently good men and women will miss the great opportunity for service and sacrifice the larger objective for immediate considerations.

The one weakness which asserts itself with harmful frequently develops when a member of the board of education seeks to meet an election obligation by rewarding his constituency. "My friend who stood by me loyally in the election," says the grateful school board member, "has a daughter who is a fine girl. She is looking for a teacher job. Besides, he will support our bond issue. He is a good citizen. I am for the home town girl, regardless——."

The position in question may call for a male instructor in the high school who comes with adequate training and experience to assume an important branch of study. But, a perverted town pride and the practice of favoritism demand recognition of the home town girl because her father has voted properly on election day and is a good citizen.

It is readily seen how easily local patriotism may submerge the issue and befog the higher objective of school administrative service. The educational expert, the superintendent or principal, who is held responsible for the efficiency of the instructional forces, is here ignored and the school board member is permitted to liquidate an obligation at the expense of the school system.

The remedy must be found in a more wholesome community sentiment in which the citizenship as a whole will recognize the prerogatives of the educational executive, frown upon all attempts to use the schools in rewarding election day activity, and hold to the higher mission of the school system.

THE SCHOOLS AS A BUSINESS OPPORTUNITY

The tendency of commercial organizations to cooperate with the local school authorities in bringing about desirable departures is growing. The schools, too, recognize the importance of a wholesome public sentiment regarding the subject of education and the services which enterprising business organizations may lend.

The Chamber of Commerce of Albany, N. Y., has gone a step farther than all other similar Commerce bodies in manifesting a helpful attitude towards the schools. That organization proceeds upon the thought that the schools are a great asset which ought to attract capital and population to Albany, and advertises the same as such.

A pamphlet issued by the Commerce body, entitled "Education in Albany, an Opportunity and a Business," sets forth the educational advantages afforded. It tells all about the schools, public, private and parochial, and provides information on the secondary and higher institutions of learning, and is handsomely illustrated.

CHOOSING NAMES FOR PUBLIC SCHOOL BUILDINGS.

The obvious purpose is to remind the youth of those of a past day who by meritorious service have made a lasting contribution to the progress of the nation and who are worthy of our gratitude and reverence.

Thus, thousands of schools throughout this broad land bear the names of illustrious men in which Washington and Lincoln lead, followed by Jefferson, Hamilton, Webster, Franklin, and by accepting at a later period, such names as Garfield, McKinley, Roosevelt and Harding.

In a western city where an enterprising newspaper threw the queston of a name for a new school open to public discussion, such names as, Luther Burbank, Henrick Ibsen Mary Pickford, and Jack Dempsey were brought to the surface. Coolidge and Pershing received some votes but the name Harding led all others and won.

The choice of a name for a new school building seldom involves a discussion which goes beyond the confines of the immediate school authorities. And yet during the past year some serious controversies have arisen not so much over the naming of new schools as the re-naming of old schools. In one instance it was the change from a national to a local name and in the others it was just the reverse. In each instance, the protest came from those who for sentimental reasons wanted to cling to the old name.

The designation of school buildings, however, involves in certain instances a practical question. In cities where a large number of buildings are located the designation by names is apt to lead to confusion. Thus, cities whose schools at one time bore the names of the nation's Presidents and martyrs now bear simple street designations as a matter of convenience. In smaller communities it is entirely feasible to adhere to names rather than street designations.

In naming school buildings it should be borne in mind that the names once chosen must serve a long period of time and that changes thereafter are bound to be met with strenuous opposition. The citizen who, as a boy attended a certain school, bearing a certain name will not tolerate the adoption of another.

The custom of commemorating great names by adopting them for school buildings should be encouraged. They lend a new dignity to a structure, direct the student's mind to the example set by a noble life, and stimulate better citizenship.

It is an established custom in this country—and at that a very laudable one—which attaches illustrious names of statesmen, heroes and benefactors to school buildings. In this manner not only names that grace the nation's history are kept before the school constituency but also local names of a worthy character are perpetuated.

THE EVIL OF FACTIONALISM IN SCHOOL ADMINISTRATION

It is probably not unreasonable to assume that many of the unpleasant upheavals in the field of school administration are due to the existence of groups and factions within board of education circles. The tendency of members of like views and sympathies to hold together in fostering projects and policies can only result in like groups bent upon opposition.

The moment that a majority group has been formed and, as such, seeks to protect its own solidarity, that moment it has also engendered the spirit of rivalry and retaliation. A board of education thus split into factions is as likely to champion a project merely to beat the other crowd as it is to serve the real interest in hand.

Some of the most embarrassing school rows of the year have been due to such divisions in the school board personnel. These divisions found their origin in the simple fact that certain members did not like certain other members, and took delight in defeating each other's measures. Such tactics are unworthy of those who engage in them.

School administration, in its better interpretation has a high mission to perform. It makes little difference as to who originates or initiates a desirable departure or measure. But, it does make a difference whether desirable departures and measures are accepted and undesirable projects are defeated.

All the agencies which make up a complete school system, schoolhouses, teachers and boards of education, serve one great purpose only, namely, the mental, moral, and physical welfare of the child.

THE SUPERINTENDENT'S OFFICE IN LARGE CITIES

The events of recent months have focused the attention of the school public upon the storms that have whirled around the superintendency job of America's two largest cities, Chicago and New York.

Chicago, which has a long history of turmoils and upheavals in school administrative effort, recently secured William McAndrew, a distinguished educator of New York, to superintend its schools. The choice was deemed a wise one. The American school public applauded the action of the Chicago board of education upon its selection, and looked for a period of calm and progress.

McAndrew had served a large city school system and came to Chicago fully equipped to meet every emergency of a huge school plant. If we do not miss our guess, he will remain master of the situation as long as his patience and strength will hold out. Will he care to brave all the storms that are yet to come his way?

EDUCATION ON A BUSINESS BASIS

The modern school system, with its tremendous physical investment and its great corps of instructors, must be conducted on a business basis. It cannot be handled in the intimate personal method of the little one-room school, any more than instruction can be personal as it once was. The same difference holds true in the matter of salaries paid to executives and instructors. School teaching, once a stop-gap or a mere stepping-stone to some remunerative calling, has become a profession in itself. It calls for special training exactly as the law or medicine. The old-fashioned teacher who "boarded 'round," or the impecunious young law aspirant who "filled in" to get college money, are a thing of the past. Intelligent people have come to recognize that the persons who are entrusted with the mental, moral and physical training of their children must be compensated on a basis that will sustain their self-respect, if not inspire their enthusiasm.—Akron, Ohio, Times.

But, the symptoms of opposition are already manifest. The first protest to his presence came from the aldermen of the city who sought his retirement because he was not in the strictest sense a local product. Now the teachers' federation seeks his dismissal because he does not accede to all of their plans. Some one else will soon come along to urge new reasons why he should not remain.

The New York situation has been less turbulent, but nevertheless quite fatal to the incumbent. There was no publicity as to the probable fate of Superintendent William L. Ettinger, except that a series of resolutions were adopted by numerous educational bodies recommending his retention. But, when the time for action came, the board of education simply dropped Ettinger. That ended the matter. Protest was of no avail.

The Chicago press approaches the school interests with greater candor and more noise. School turmoils provide interesting news matter. All movements and counter movements lend themselves to sensational newspaper stories. The board of education is confronted with publicity on every phase of its own administrative policies and conclusions.

In reviewing the trials which beset the modern school superintendent one must come to the conclusion that they are no different in the large cities than they are in the smaller. They merely vary in degree. The instability of tenure may be greater in large centers, and the contributing factors to such instability more pronounced, but they do not differ in kind.

To combat contention in the larger community unquestionably involves greater strength of character, a clearer grasp of the objective, and a better finesse in dealing with men and affairs. The school superintendent who can successfully meet a perplexing situation must possess the power to choose the right path, hold to it consistently and persistently, regardless of consequences, and face his fate manfully and courageously. If he is defeated, he is by no means conquered.

He must above all things adjust his mental attitude to the unpleasantries of the situation, and remain calm and undisturbed in the face of opposition and criticism if he is to weather the storms that beset his office.

THE DEPARTMENT OF SCHOOL ADMINISTRATION

The annual meeting of the National Education Association will this year be held at Washington, D. C. The department of school administration of that organization will meet on Wednesday and Thursday, July 2nd and 3rd.

The program has been planned with a view of covering the most timely problems in the field of school administration, and will prove of vital interest to boards of education of eastern cities.

The financial independence of school boards, for instance, has been agitated in the halls of legislation of several states during the past year and should come under the scrutiny of an official body like the department of school administration. Able administrators have been chosen to express their views. The alignments and adjustments of the several factors governing a school system will also come under discussion.

The subject of school architecture, which is always one of live interest, will be dealt with by some of the great experts in that field. The constant progress made in the field of school architecture, involving both economy and utility, render the subject one of vital concern.

The members of boards of education in the eastern cities are afforded an exceptional opportunity to participate in a discussion of their own problems in the light of present day conditions.

OAK GROVE TEACHERS' DORMITORY

Helen Lohrstorfer

One of the interesting experiments of its kind is the dormitory for teachers that is successfully conducted in Flint, Michigan—successful from the viewpoint of both teachers and board of education. This experiment was first made possible because a site purchased for a new high school, already had on it six good sized buildings once used as a hospital and in fairly good condition. These buildings, too well built to be torn down, were standing unused, when some far-seeing members of the teachers' club had a vision of their possibilities and after convincing the board of education that it would be a benefit to themselves as well as to those teachers who would live there, permission was granted to try the plan for a year. It must be admitted that there was much skepticism, both on the part of school authorities and even teachers themselves. But the plan has been a success, until now in its fourth year, every possible nook and cranny is filled and 136 girls find pleasure and comfort in their surroundings.

The administration is conducted through a board of directors which consists of representatives of the board of education, the Teachers' Club, and the girls who live in the dormitory. During the first three years, the financial problem was met by an arrangement whereby the dormitory paid all bills for interior decorations and repairs and three-fourths of all bills for light and heat. The reason for the board of education's assuming one-fourth of the light and heat was that the offices of the superintendent, assistant superintendent, supervisors, school clinic, and school museum were housed in the buildings. This year a flat rate is being paid to the board in the form of rent, and the attendance officer and community music director also have offices in the building.

One of the objections to the club was the fear on the part of some teachers that there might be a tendency to talk "shop" where there were so many people with a common interest. This has not proved to be so, but instead there has been an opportunity for association with people whose tastes were congenial and whose friendships were pleasant. A certain amount of social life is enjoyed, and a sense of freedom pervades

OAK GROVE CLUB, FLINT, MICH.

that would not be possible if one were in a private home, no matter how kindly the people might be.

A house matron manages all details pertaining the housekeeping arrangements, and a secretary takes care of all finances. Meals are served at a reasonable cost; no effort is made to profit from them. The purpose at all times is to clear expenses and leave a margin for replacing worn-out materials such as towels, rugs, curtains, bedding, and dishes.

Room rent varies from four dollars a week to seven, as some rooms are larger, some have a fireplace and some a private bath. A laundry run in connection with the dormitory allows each girl to have her washing done for her and the ironing she does herself.

When the effort was being made to secure Oak Grove as a dormitory, a well meaning but dubious business man of Flint expressed himself as opposed to the idea. He felt certain, he said, that so large a group of teachers could not live together without friction as neither their dispositions nor their work was conducive to pleasant relations. But young teachers newly released from college live by the side of and in perfect accord with others who have been in the service for many years. The fact that some of the girls who were living at the club the first year of its existence, are still there and are enjoying it as much as ever, is ample proof of its success without further comment and disproves the ancient theory concerning the inability of teachers to live in harmony.

FOUR INTERESTING VIEWS OF THE OAK GROVE CLUB.

Upper left: The library is a quiet room for study, containing a popular as well as a professional library. Upper right: The affairs of the club are administered from a central office which is home-like as well as business-like. Lower left: A typical teacher's private room. Lower right: The parlor is a large room where the social gatherings are held.

COMING UP

Harry E. Stone

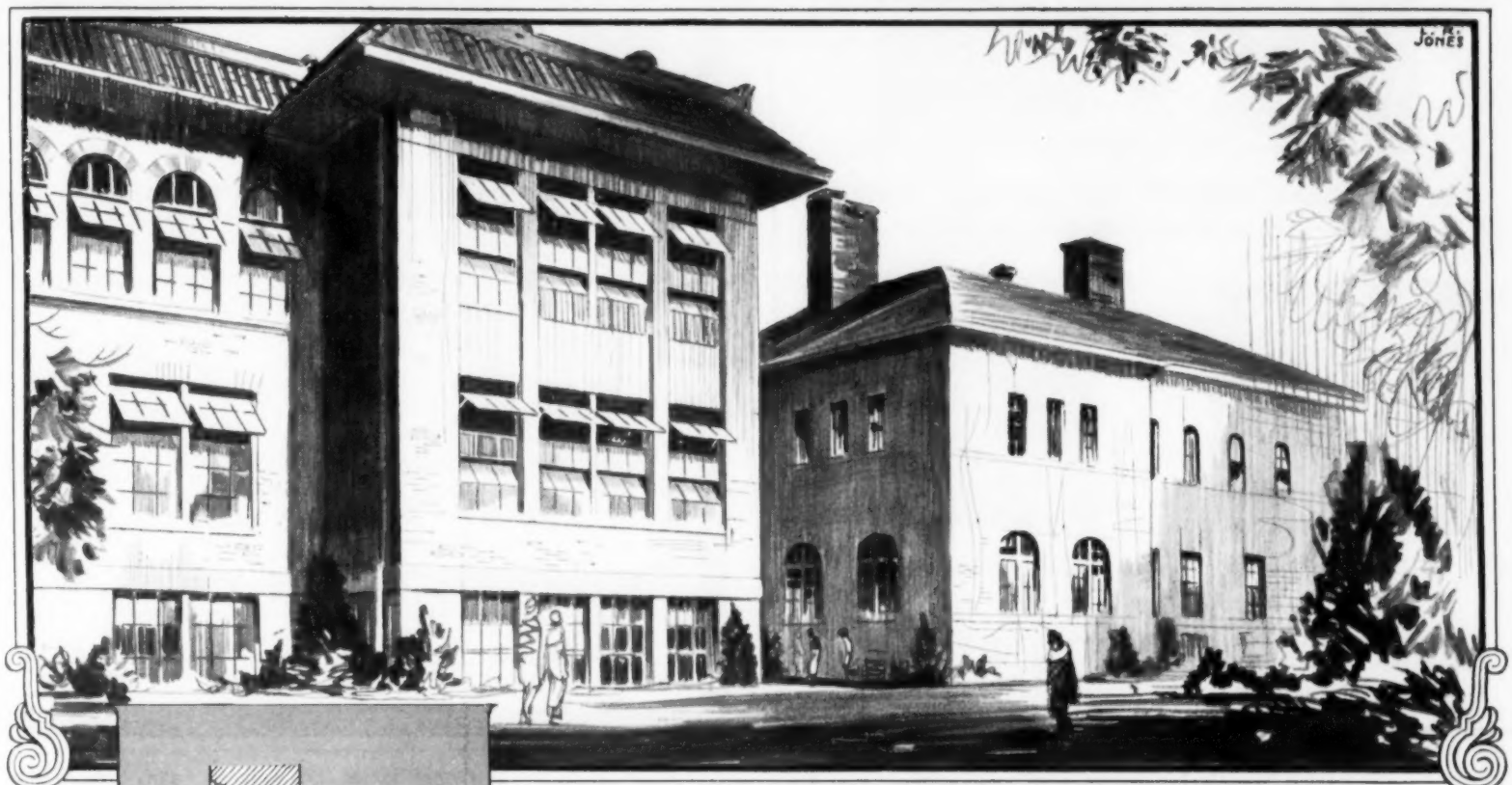
"That the University should aim to pay a salary of not less than $10,000 to a professor of long service and distinction, is certainly sound policy," were the most striking words in the recent annual report of President Nicholas Murray Butler of Columbia University.

Ten thousand a year for a college professor! A hundred thousand for ten of 'em! That's exactly what the report recommends. And there's another recommendation that ought to solve some problems for the wives of a few more. It reads: "That twenty-five professorial positions be created with the salary of $7,500 each."

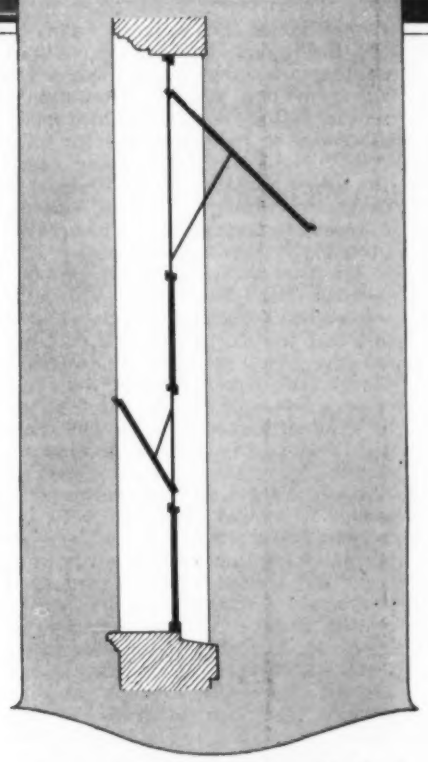
Not long ago a suggestion was made that each great university create at least ten professorships paying each $20,000 a year to the end that science might not lose so many able men to less important occupations. One of the greatest of our universities has come half way. Who can measure the benefits that society will reap from this action?

Any professor who because of service and distinction becomes a recipient of a place on the ten thousand dollar roll of honor established by Columbia University will, through struggle and sacrifice, have reached the plane where money reward for professional service will never be more than an "honorarium."

ARCHITECTURAL FENESTRA



At left, new Xenia, Ohio, High School; at right, the old building. *Architects* of new building, Pretzinger & Musselman; *Contractor,* Industrial Building Co.



Cross section of Fenestra Reversible Ventilator Windows shown above. The "open-in" ventilators at bottom deflect fresh air currents over the heads of the pupils, while the "open-out" ventilators at the top complete the natural, healthful circulation of air.

The old and the new; daylight and darkness. Here, in one school yard, is the old type of school building, with wood windows, poor light, poor ventilation; and beside it the modern school with Architectural Fenestra windows, providing plenty of daylight, scientifically controlled ventilation, and resistance to fire.

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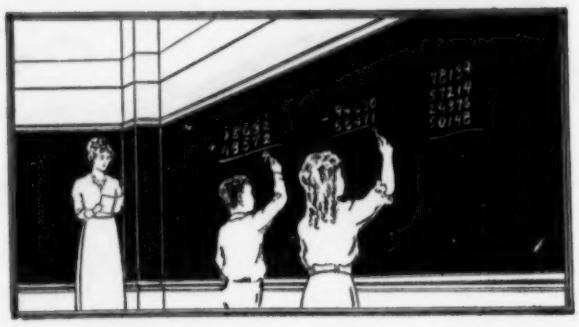

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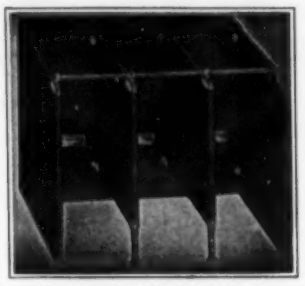

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Washington Correspondence

EDUCATION AND CONGRESS

There are now before Congress some dozen or more education bills, all of which have been referred to the committees on education of the Senate or House and most of which await committee action. Hearings are being held at regular intervals, but the interest manifested is much less than deserved, largely because of the many absorbing matters before Congress at the present time. It is, therefore, hardly probable that any of them will be enacted into law, or even be reported out of committee at the present session, except the rehabilitation measure mentioned below.

Weekly hearings have been held during the winter and spring on the Sterling-Reed Department of Education Bill. At these meetings much was discussed besides the proposed measures of the bill. Constantly its supporters and others showed their interest in another measure, the Dallinger bill which would "provide for the better definition and extension of the purpose and duties of the Bureau of Education."

The feeling often expressed was that this was legislation along the right line, acceptable to the great majority, and on which immediate action might be possible. Little opposition to it has developed, largely because its provisions are those that are common in several other bills. In fact, it would seem that its author in its preparation deliberately picked out from the various other bills their common provisions as the basis for his proposed legislation. He seems to have looked for a common ground on which all could stand so that an immediate forward step in the interests of more effective government leadership in education would result.

This Dallinger Bill (H. R. 6582) directs the Bureau of Education, in addition to the duties now conferred upon it, to conduct studies and investigations in the following fields: (1) illiteracy; (2) immigrant education; (3) public school education, including administrative organization, construction of school buildings, cost of public education, and organization and arrangement of school curricula; (4) vocational education; (5) physical education, including health education, recreation, and sanitation; (6) preparation and supply of competent teachers for the public schools; (7) higher education, and such other educational matters and subject as in the judgment of the Commissioner of Education may require attention and study. It provides for the transfer of the Federal Board for Vocational Education to the Bureau of Education, authorizes an appropriation of $500,000 annually for the proper conduct of the investigations specified above, frees the Commissioner of Education from Civil Service requirements in making short-time appointments of experts to assist in these investigations. It also creates a Federal Council on Education in the Bureau consisting of representatives from the other Executive Departments, and creates a National Council on Education composed of fifteen representative citizens selected by the Commissioner of Education.

A little confusion has been noted in various circles concerning this measure and another Dallinger education bill before Congress (H. R. 5795) which would establish a **Federal Department of Education and Welfare** with a Secretary in the President's cabinet. The Department would include four main divisions: (1) Education; (2) Public Health; (3) Social Service; (4) Veterans' Service. In the division of education, under an Assistant Secretary of Education, would be the present Bureau of Education, the Federal Board for Vocational Education, and several other bureaus and offices whose work is primarily education. This bill includes the provisions of the reorganization plan for the Executive departments as recommended by the special congressional committee on reorganization and approved by the late President Harding.

The Sterling-Reed bill is identical with its predecessor, the Sterling-Towner bill, earlier known as the Smith-Towner bill. It is now Senate Bill 1337 and House Bill 3923. Its provisions for the work of the proposed Secretary and Department are almost identical with those proposed by Mr. Dallinger for the Bureau as outlined above. In addition, it carries an authorization for an annual appropriation of $100,000,000 to assist the States in the promotion of education on the so-called 50-50 plan. Its provisions are so well known that further mention here is unnecessary. It will probably remain in committee this session.

Another important measure is the vocational rehabilitation bill (H. R. 5478) introduced by Mr. Dallinger. This would continue in force for another four-year period the act of four years ago providing for the promotion of vocational rehabilitation of persons injured in industry or otherwise in co-operation with the States on the "50-50 plan," the work being carried out under the administration of the Federal Board for Vocational Training. This bill was reported out of committee favorably on February 7, and will probably be enacted into law.

All other bills are of minor importance except perhaps two—Senator Fess' bill for a national university, practically identical with his previous bill, and the Purnell bill (H. R. 157) "to authorize the more complete endowment of agricultural experiment stations" by an appropriation of each State of $15,000 the first year increasing by gradual amounts to $85,000 the seventh year. This would be in addition to amounts already received from the Federal Government by the States for their agricultural experiment stations under the so-called Hatch Act of 1887 and the Adams Act of 1907. From these each State Experiment Station now receives annually $30,000 from the United States Treasury. This money is entirely distinct from the funds appropriated by the Federal Government for the State Colleges of Agriculture and Mechanic Arts. For these institutions, each State receives annually $50,000 for college work and an additional amount for agricultural extension teaching. Each year $5,880,000 is divided among the States in proportion to their rural population under the provisions of the so-called Smith-Lever Act for this extension work.

Congress has considered two other matters of direct interest to educators, but not affecting public schools to any great extent. One has to do with the exemption of income tax on moneys or property donated to educational institutions. The other, in the immigration bill, has to do with the admission to the United States of foreigners as bona fide students in approved institutions in this country, without reference to the "quota." At the end of the period for which admitted they will be required to leave the United States. There are over 10,000 foreign students in the United States at the present time, this number not including approximately 3,000 Filipinos. An interesting provision in the new measure is that

(Continued on Page 72)

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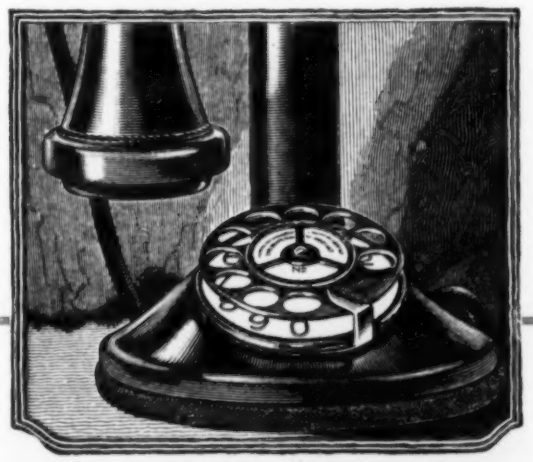

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(Continued from Page 70)

the institutions which may be attended by these non-quota students must be those approved by the **Secretary of Labor.**

PUBLIC SCHOOL MEN AND THE AMERICAN COUNCIL ON EDUCATION

Public school men have found relatively little of interest in the past in the American Council on Education although the National Education Association is one of its constituent members. The Council is now, however, entering fields of activities which are sure to attract their attention and bring them into more active association with it than ever before. Its new "Junior College" standards and "Teachers College" standards, adopted at the Annual Meeting in Washington during May, directly and indirectly affects the public schools. Both of these types of institutions are more closely affiliated to elementary and secondary schools in their administration than they are to universities and colleges.

A "Junior College," according to the definition submitted at this meeting of the Council by its Committee on College Standards, is "an institution of higher education which gives two years of work equivalent in prerequisites, scope, and thoroughness to the work done in the first two years of a college as defined elsewhere by this Committee."

The standards follow what might be expected from this definition, differing from those already adopted by the Council for the four-year college only as a two-year institution must differ from a four-year institution. The entrance requirements are the same. The units for graduation are one-half of those for the full college. The teaching staff must be college graduates with at least one year of advanced work in a recognized graduate school. "The curricula should provide both for breadth of study and for concentration and should have justifiable relations to the resources of the institution." The junior college must have at least fifty students, and a minimum operating income of $20,000 or its equivalent.

The standards and principles for accrediting normal schools and Teachers' Colleges define these institutions as follows:

"The normal schools or teachers' colleges are institutions of higher education with two-year, three-year, or four-year curricula designed to afford such general and technical education as will fit students to teach in elementary and secondary schools."

Admission requirements according to the standards are the same as for colleges; sixty hours of credit for graduation for the two-year normal, and 120 semester hours from the four year if the baccalaureate degree is conferred. The two-year and the four-year curriculum each must be unified but separately organized. The college curriculum to be accredited must have at least 100 students, 25 of whom must be in the junior and senior classes.

In general the requirements for being accredited are those of the "Junior College" and "Senior College" respectively. In addition, practice teaching and observation are required:

"In order to make practice teaching and observation the unifying and dominant characteristics of the curricula of normal schools and teachers' colleges, adequate provision should be made as to the number of pupils enrolled in the training department, the number and preparation of the teachers in the training department, and the amount of practice teaching and observation required of each candidate for graduation."

Another work of the Council of interest to public school authorities is the finance inquiry being conducted under its direction with funds appropriated by the Commonwealth Fund, the Carnegie Corporation, the General Education Board, and the Milbank Memorial Fund. The work is immediately under a group of nine men from public schools, university departments of education, and business. The study is a comprehensive investigation of educational finance in the United States. Intensive studies have been made in the States of New York, Illinois, Iowa, and California. The report is being printed in a number of volumes, two of which are already available, and others are in the hands of the printers.

The American Council on Education was organized in 1918 for the purpose of forming an agency through which the Government of the United States might be able to secure rapid and effective co-operation with the universities and colleges of the country, wherever it needed their assistance, in war work. From this, it developed into a permanent association to act as an unifying agency among higher education institutions. It is composed of three classes of members, constituent, associate, and institutional. The first class at present includes fourteen national associations of higher education. The associate members are thirteen national societies concerned with higher education but not primarily concerned with the establishment of educational policy. These include such organizations as The American Association for the Advancement of Science; American Historical Association; National Research Council, and others. The institutional members are individual universities, colleges, professional and technical schools. There are nearly 150 members of this class.

The Council maintains a permanent office in Washington with a full time director. It is supported by membership fees. It functions through this office and director, and also through several standing committees, such as its Committee on Federal Legislation; Committee on International Educational Relationships; and Committee on College Standards.

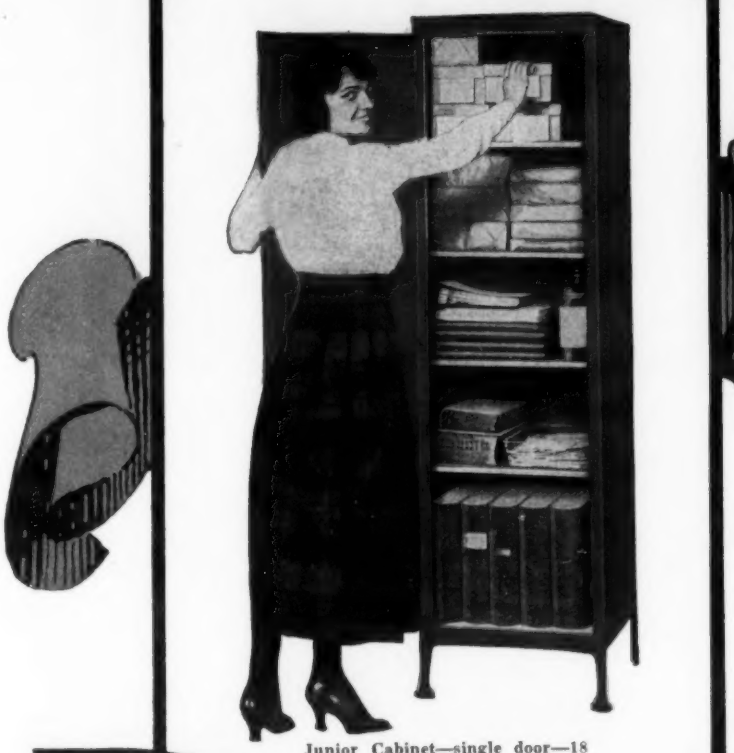
THE U. S. COMMISSIONER OF EDUCATION AND HIS THREE YEARS OF SERVICE

On June second, John J. Tigert, United States Commissioner of Education, completes three years at the head of the United States Bureau of Education. This is, therefore, an opportune time to review briefly his record as Commissioner and that of the Bureau under his administration.

No radical changes in the general policies of the Bureau or in the character and kind of work undertaken have been made. There has been a change in interior organization into a "technical" division and a "service" division which has been beneficial. The Bureau has issued about 160 printed bulletins during the three years as compared with 190 during the preceding three year period, but it has issued a large number of circulars and leaflets. The range of subjects covered and the quality of the subject matter in these publications is about the same.

The Bureau under Dr. Tigert's administration has fared well at the hands both of the Department of the Interior and of Congress. The Department has given to Dr. Tigert and his assistants the most desirable quarters the Bureau has ever had. Early in 1917, after War was declared, the Bureau moved from its crowded quarters in the Land Office Building to even more crowded and undesirable quarters in

(Continued on Page 74)



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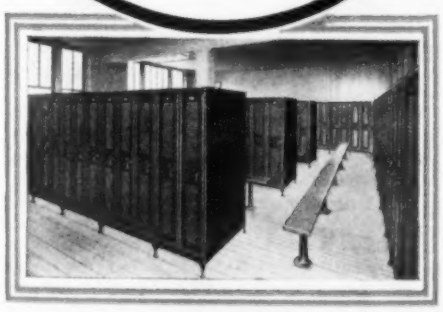

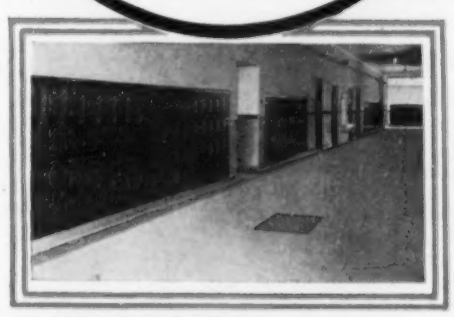

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(Continued from Page 72)

the Pension Office Building. It stayed there until in 1923, when through Tigert's efforts, splendid quarters adjoining the Secretary's office itself on the sixth floor of the new Interior Department Building were allotted to it, with rooms for the library on the third floor. The Bureau is now more accessible than ever before.

Its treatment from Congress is indicated by two facts: Congressional committees, observers remark, receive Dr. Tigert with more cordiality than they received his predecessors for many years, and the Congressional appropriations for the Bureau have constantly increased. For the fiscal year ending July 1, 1924, the Bureau has a total of $644,260; and an additional $63,360 paid to its employees under the bonus provision. Of this first amount, $355,000 is for the education of the natives of Alaska, $90,000 for medical relief in Alaska, and $10,000 for reindeer for Alaska; and $189,260 for the work of the Washington office, i. e., general investigations, researches, and studies of educational matters and the distribution of information and advice resulting from these studies. Printing expenses are additional, being met from a general department printing appropriation. The appropriation for the Bureau for Dr. Tigert's first year (made, of course, before he assumed office) was $586,960, of which $161,960 was for the Washington office, and $425,000 for the education of natives in Alaska. The appropriation for the year beginning July 1, 1924, will be in all probability $224,040, for the Washington office, and $478,340 for the Alaska work. This includes an increased appropriation to cover the bonus making the actual amount to be paid under the Bureau's administration approximately an increase over the present year of $19,720 for the Washington office, and $13,340 for the Alaska educational activities. This is altogether for the Washington office in three years an increase of $47,020 and for the Alaska work of $33,340.

During these three years, Dr. Tigert and the Bureau have worked under a peculiar handicap not generally appreciated because applied by friends unintentionally. Well-meaning persons interested in securing a Federal Department of Education, in their efforts to obtain a large and important government education office with a place in the President's cabinet, to replace a relatively small office headed by a commissioner only, have distributed propaganda magnifying the deficiencies of the present office. It has not criticized the work done by the Bureau; it has, in fact, been rather patronizing, saying in effect:

"It has done very well as a tiny Bureau, but it is so small that it is hopeless to try to make itself felt in the educational world." It has been, as said before, an unintentional handicap, but nevertheless very real, and the Bureau deserves special credit for its progress in spite of it.

To summarize: Dr. Tigert and the Bureau under his administration have continued steadfastly the non-spectacular high grade work for which it has been known for years. It is, as in the past, furnishing a large degree of leadership in the national development of education throughout the country. Its influence is felt, and because it has no administrative functions (except as concerns the Morrell-Nelson funds for the State Colleges of Agriculture and Mechanic Arts), its advice is sought. A nationally prominent educator, formerly head of a State school system, and now a professor in a large university, at a public meeting recently said: "I have found in my experience that the advice, assistance, and information obtained from the U. S. Bureau of Education is much more reliable than that from any other source. The Bureau has rendered and is rendering a very large service to the educational progress of the country."

THE WASHINGTON MEETING OF THE NATIONAL EDUCATION ASSOCIATION

The annual meeting of the National Education Association, to be held in Washington this summer (June 29 to July 4), promises to be an unusually large gathering, according to the reports being received at the headquarters of the National Education Association. Teachers from all sections of the country will take this opportunity of visiting their national capital. The complete program, to be announced later, will be a great attraction in itself, but Washington, with its public buildings, national museums, its public parks and points of historical interest, will be a greater attraction. Low railroad rates have been arranged.

The meetings for the most part will be held at the Central High School. The evening sessions will be held in the stadium, weather permitting. A specially lighted platform will be erected for the speakers and "loud speaker" installed, which will permit an audience of 10,000 to hear with the greatest of ease in any part of the immense concrete construction. Standing as it does on the heights well above the city, and opening to the south from which direction Washington gets its evening cooling breezes, it promises to be a splendid place for these meetings. Other meetings will be held in the High School auditorium, which seats approximately 3,000, and in the gymnasium, and larger lecture rooms.

The vesper service on the steps of the Capitol will be held Sunday afternoon at 4 P. M., with music by the Army Band and an address by Payson Smith, State Commissioner of Education. Sunday evening there is to be an open air meeting at the stadium at Central high school with three speakers, one a Protestant, one a Catholic, and one a Hebrew, to discuss the general theme of religion, morality, and education.

The formal opening on Monday evening will be the first meeting in the stadium. The addresses of welcome to be given by the United States Commissioner of Education and the City Superintendent of Schools will test out the stadium as an auditorium. The comfort of the audience will depend upon the breezes.

In arranging the program the officials of the National Education Association have wisely recognized that the visitors will spend much time visiting points of interest in the city. Therefore, they have left much time free for the purpose.

The closing day of the convention falls on the Fourth of July, thus making a marvelous opportunity for the nation's teachers to gather in the nation's capital on the nation's birthday to pay tribute to the many shrines of historical interest in and about Washington and give evidence of the patriotism of the teachers. After a speech by a great American at an early morning session, a brief period will be left for teachers to travel in groups to one of many places previously selected as a patriotic pilgrimage. At noon at each of these places, brief programs will be conducted, all by notable men and women. Some of these points of pilgrimages are Mt. Vernon, Arlington Cemetery, the Lincoln Memorial, Washington Monument, the Capitol, Walter Reed U. S. Army Hospital and the crypt of Bethlehem Chapel where rests the remains of the late Woodrow Wilson.

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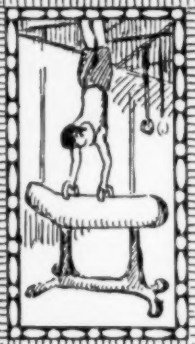

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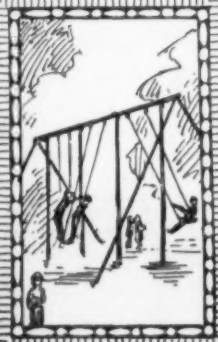

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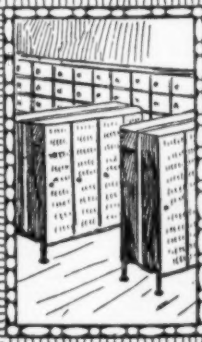

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SCHOOL LAW

District Property, Contracts, and Liabilities

—A school district's contract for the purchase of building materials, entered into at a time when the district had sufficient funds with which to pay for materials, is held not void under the Oklahoma Const., article 10, §26, limiting indebtedness though the fund was subsequently dissipated.—School Dist. No. 8 in and for Marshall County v. Home Lumber Co., 221 P. 433.—Okla.

A third party furnishing material to the general contractor for the construction of school buildings does not contract that the architect of the buildings shall be the arbitrator of questions of damage or disputes as to whether the materials are in conformity to the plans and specifications as provided in the original contract for the erection and construction of the buildings.—Central Nebraska Millwork Co. v. Olson & Johnson Co., 196 N. W. 707.—Nebr.

District Debt, Securities, and Taxation

—Under the Ohio General Code, §2294, where a board of education advertises for bids for the purchase of bonds issued under section 7630-1, it is mandatory upon such board to accept the highest bid therefor.—State v. Patton, 142 N. E. 239.—Ohio.

A bid for the purchase of school bonds, which contains a qualification that the board shall furnish a certified transcript showing said bonds to be legally issued in accordance with the Ohio General Code, §7630-1, is held not conditional or unlawful.—State v. Patton, 142 N. E. 239.—Ohio.

Where a school tax was not levied on or before the first Tuesday in August, as required by the Illinois School Law, §190, a levy made after that time was illegal, and was not validated by the curative act approved June 27, 1923 (Laws 1923, p. 612), which purports only to validate a tax when the certificate of levy has not been returned within the time specified by the statute.—People v. Chicago, B. & Q. R. Co., 142 N. E. 176.—Ill.

School District Claims

—Where a school district issued bonds for the erection of a new building and contracted for material, the materialman was not required to file a verified claim under the Oklahoma Comp. St. 1921, §§10385-10391-10393, as a condition precedent to action, since such statutes have reference to claims for current expenses payable out of current funds.—School Dist. No. 8 in and for Marshall County v. Home Lumber Co., 221 P. 433.—Okla.

Teachers

—Under the Arkansas Crawford & Moses' Dig. §8942, the board of directors or trustees of a school district are not restricted as to the length of term for which they may employ a superintendent, nor are they restricted to such a time as is within the term of office of all of the members of the board, the reasonableness of the length of term of employment determinable by all circumstances being controlling.—Gardner v. North Little Rock Special School Dist., 257 S. W. 73.—Ark.

Under the Arkansas Crawford & Moses' Dig. §9030, prohibiting the employment of a teacher for a longer term than one year unless the district has money to its credit to pay for such work, is inapplicable to contracts for employment of a school superintendent.—Gardner v. North Little Rock Special School Dist., 257 S. W. 73—Ark.

That the personnel of the board of directors of a school district may change in part during the life of a superintendent's contract does not render the term thereof unreasonable.—Gardner v. North Little Rock Special School Dist., 257 S. W. 73.—Ark.

That a contract employing a school superintendent for a period of two years was entered into just before a change in the personnel of the employing board, does not warrant an inference of fraud or collusion.—Gardner v. North Little Rock Special School Dist., 257 S. W. 73.—Ark.

Findings and determinations of a school board on charges of immorality against a superintendent, made after due notice appointing a time and place of hearing, resulting in his dismissal, are conclusive, except when corruptly made in bad faith or in abuse of its powers, and may not be attacked in an action for salary after dismissal.—Finch v. Fractional School Dist. No. 1 of Vassar and No. 2 of Tuscolar, 196 N. W. 532.—Mich.

In an action by a discharged superintendent against a school district to recover compensation due under his contract, a denial in the answer of the execution of the contract itself is sufficient to raise the questions of the legal power of the district to make the contract.—Gardner v. North Little Rock Special School Dist., 257, S. W. 73.—Ark.

A school superintendent who after wrongful discharge was elected mayor of a city is held not entitled to deduct from the amount earned at such new employment his campaign and election expenses in determining the amount recoverable by him for his wrongful discharge as superintendent of schools.—Gardner v. North Little Rock Special School Dist., 257 S. W. 73.

Pupils and Conduct of Schools

—In Kansas in a city of the first class, neither the superintendent of schools nor the board of education has authority to separate pupils of the negro race from those of the white race on account of race or color, unless authorized by statute.—Thurman-Watts v. Board of Education of City of Coffeyville, 222 P. 123.—Kans.

Under the South Dakota Revised Laws of 1919, §7517, as amended by the Laws of 1921, c. 214 providing for admission of pupils to high schools from the eighth grade, applies only to those who have successfully completed work of that grade, as established in the state course of study, and also possess a common school or eighth grade diploma, and hence a high school board was justified in refusing admission to one who had not completed the prescribed course of study.—Duncan v. Board of Education of City of Sioux Falls, 196 N. W. 547.—S. Dak.

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—ROOSEVELT.

Actual Scene in a Cleveland School.

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In the Language of its Users

AT the Thrift Conference at the Women's City Club on March 20, Miss Annie J. Robinson, Principal of Hazeldell School, Cleveland, gave a most inspiring talk on the social value of school thrift. The following is her condensation of that talk:

"The plan of teaching children to save and to bank their savings is certainly a step in the right direction. If a forward look is taken by urging the child to save for a definite purpose, much has been gained.

In the past nearly every child in the family owned a little tin bank into which he was persuaded to put the money he wished to save. On some occasion, when the mother of the household was short of change the child's bank was called upon to furnish the necessary cash which was extracted from its resting place by means of a knife or hatpin.

In a case like this the child has not been taught a lesson of thrift nor the value of having a possession of his own, but rather he has been taught the futility of having a savings bank which may be broken into by the one he most trusts on earth—his mother.

The plan now in operation in the schools takes care that the child puts his money into a real bank. He learns that when he possesses a dollar he may set it at work at once.

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SCHOOL FINANCE AND BUILDING

A BUILDING EXIT CODE FOR SCHOOLS[1]

Section 21—Schools

Introduction

2101. The fundamental principle of this code is to provide exits sufficient to empty school buildings promptly after alarm of fire has been given, and to provide for construction such that buildings may be emptied without danger to life by fire, smoke, or resulting panic. Property damage from fire is not the concern of this code, although many of the requirements made for life safety will incidentally contribute toward fire safety of school building property.

2102. This section does not go into details of stairway construction and other engineering standards, but makes reference to the engineering standards sections of the code for such features, covering here only features where variations from the general standards apply to school buildings. In cases where there are differences between this section and the general provisions of other sections, the provisions of this section take precedence for school buildings.

2103. This code gives minimum requirements in all cases; better construction should be used where circumstances permit. It applies to both new and existing buildings; for existing buildings subject to the modifications given in § 2149-2161.

Building Construction

2104. The following requirements (2105-2120) shall govern construction and limit heights.

2105. For the purposes of this code, the basement (or "ground story") shall be considered a story if the ceiling is 7½ feet or more above the grade level at any point next to the building.

Note—This is to prevent evasion of requirements e. g. by designating as "two-story and basement" a building which from a life safety standpoint is really a three-story building.

2106. All buildings over two stories in height, and two-story buildings if basements are used or usable for any purpose other than the heating plant, shall be of fire-resistive construction.

2107. Three and four-story buildings (or two and three-story building if basements are used or usable for any purpose other than the heating plant) shall have fire-resistive floors, walls, and partitions; but trim, finish floor, sash, doors and frames may be of wood, except where otherwise required.

2108. Buildings of more than four stories and four-story buildings if basements are used or usable for any purpose other than the heating plant shall be of fire-resistive construction throughout except that finish floor may be of wood.

2109. The interior wall and ceiling finish in buildings of more than one story and in one-story buildings if basements are used or usable for any purpose other than the heating plant, where hollow wood studded wall and partition construction is used, shall be plaster, or other finish equally smoke-tight and fire retardant. Wood or other combustible finish shall cover only minor portions of the wall surface and where used shall have plaster or equivalent backing (e. g. wood wainscoting prohibited). All hollow spaces in wood stud walls or partitions shall be fire-stopped at floor lines with incombustible material. Board floors on wood joists shall be double with fire-retarding felt or paper between layers.

2110. In buildings of two stories or more all glass between rooms and corridors shall be wired glass.

2111. All basement walls and partitions shall be of fire-resistive construction.

2112. It is recommended that first floor be entirely of fire-resistive construction.

2113. Floor construction shall be fire resistive immediately above rooms used for manual training, domestic science, kitchens, laboratories, shops, boiler or heater rooms or fuel storage, or other similar occupancy.

2114. Doors to basement rooms of occupancies listed in Sec. 2113, leading to stairs, corridors or other lines of exit shall be self-closing, of metal or metal covered, and windows leading to corridors shall be approved wired glass windows with stationary metal frames.

Heating Plants

2115. All heating plants within school buildings, including fuel storage rooms, shall be completely surrounded by fire-resistive enclosures with self-closing fire doors protecting all openings thereto, except those in exterior walls.

Auditoriums and Gymnasiums

2116. Auditoriums shall not be located above the first story, nor be below the grade at any exit, and in any case shall be so placed that all of the required independent exits (not including balcony exits) shall afford egress with a vertical descent of not more than 15 feet to the ground. (See also Sec. 2136 and Sec. 2146.)

2117. In buildings of ordinary construction, gymnasiums shall conform to Sec. 2116.

2118. In buildings of fire-resistive construction, gymnasiums shall conform to Sec. 2116, if used for auditorium purposes; if an auditorium is also provided in the same building (so that the gymnasium will not be used for auditorium purposes) gymnasium may be in upper stories if egress facilities are provided in accordance with other sections of this Code.

Light Wells and Shafts

2119. Light wells are not recommended. If provided, they shall be open at the top. If less than ten feet in least dimension, they shall be enclosed by walls having fire resistance at least equal to that specified for stair enclosures and shall have wired glass windows in stationary metal frames.

2120. Elevator and dumb waiter shafts shall be constructed of fire-resistive materials at least equal in fire resistance to the required stair enclosures, and all openings shall be provided with approved fire doors kept normally closed by means of proper hardware. Other openings such as dust and package chutes shall be enclosed or protected in a standard manner. Incinerator chutes shall be so arranged and protected that fire cannot travel back through them.

Number and Location of Exits

2121. Stairways and other exits shall be provided in sufficient number to comply with the Rules for Determining Required Exits (Sections

(Continued on Page 80)

[1]This code is tentative and is recommended for adoption by a committee of fourteen experts, representative of nineteen national organizations. The material here printed includes only the section on School Buildings and is worthy of study by all school authorities and others interested in safe schoolhouses.—*The Editor.*

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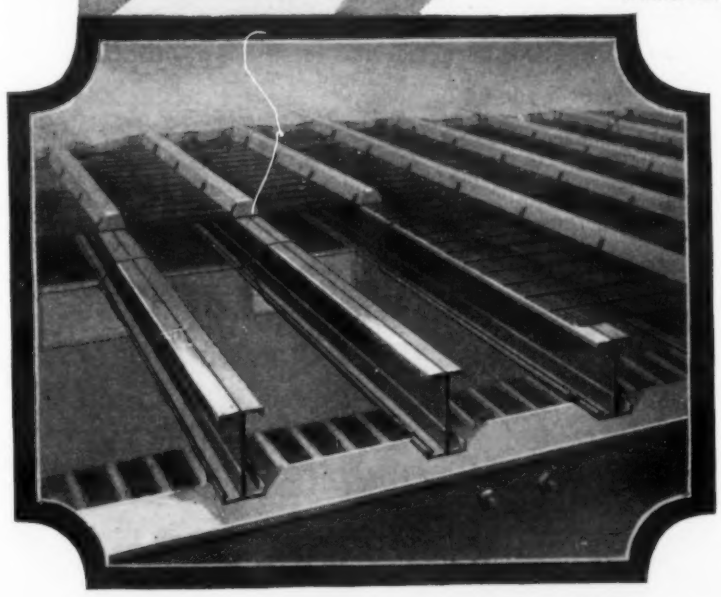

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(Continued from Page 78)

2135-2141), and shall also comply with the following requirements.

Note—The term "exit" is intended to describe egress secured through one or more openings leading out of doors either directly, through a stairway, or through a way of access to such an opening or stairway, which way is protected by a smoke stop.

2122. Not less than two inside stairs, or smokeproof towers, remote from each other, shall be provided from every floor, including basements.

2123. Exits shall be so arranged with respect to corridors, passages and stair wells that there are no pockets or dead ends in which pupils might be trapped.

2124. All required stairways shall be located adjoining outside walls and shall open directly outdoors.

2125. Exits shall be so located that at least one stairway or other exit will be within 100 feet (measured along the line of travel) of the corridor exit of every room.

2126. In buildings of non fire-resistive construction every room above the first floor with capacity of over twenty pupils (400 sq. ft. as per Section 2135 note) shall have at least two means of egress. In case these egresses finally open upon the same corridor, the openings into the corridor shall be on opposite sides of a smoke-resistive door, and shall give access to independent stairways.

Note—This requirement may be satisfied by intercommunicating doors between classrooms provided that there is a smoke stop (see Section 2132) across the corridor connecting the stairways, or the classrooms nearest stairways open directly into stairway enclosures.

Corridors

2127. Corridors shall be at least 8 feet wide in the clear; doors of lockers, if any, shall not project into this 8 ft. clear width at any point during their swing.

Note—It is recommended that in elementary schools lockers should not be located in corridors.

Stairway Construction

2128. Stairs shall be Class A as specified in the section of this code on stairways.

No winders shall be permitted on stairs used by pupils irrespective of whether stairs constitute required means of egress.

Class A stairs are the best type specified; minimum stair width 44 inches, and intermediate handrails where stairs are over 66 inches wide, maximum rise 7 inches minimum tread, exclusive of nosing, 10½ inches, intermediate landing where stairs are over 10 feet in height, etc.

Stairs shall be of incombustible construction throughout, except that in non-fire-resistive buildings of four stories or less, wooden construction may be used provided that underside of stairs is protected in accordance with section 102 (with cement or gypsum plaster on metal lath and thoroughly fire stopped).

2129. Wherever stairways are specified in this code, Ramps of the same class may be substituted. (Ramps are credited with a greater capacity than stairs, see Section 2136.)

Stairway Enclosures

2130. All stairs shall be enclosed with enclosure Types Nos. 1 or 2 as specified in the section of this code on Stairways except that for non-fire-resistive buildings, No. 3 shall be permitted (see Sections 135-144).

Doors and Smoke Stops

2131. All doors into stair enclosures shall be of self-closing type, shall swing with the exit travel and be smoke resistive.

Note—By a smoke-resistive door is meant a light door of metal or metal covered or other approved type with clear wired glass panels.

2132. Smoke stops, the doors of which shall be double swing, should preferably be provided across each corridor between each two stairways, and shall be provided one in every corridor of 150 feet or more in length, and in any case not over 150 feet apart. (See also section 2126.)

2133. Doors in smoke stops and in stair enclosures, if kept normally open, shall be provided with fusible link holds or equivalent devices and also shall be provided with an electric release connected to the fire alarm system of the building, so arranged that doors will be released whether by heat or by an alarm; or, where there is no electric fire alarm system, (friction devices of a type that may be readily disengaged) may be used for holding doors open.

2134. Exterior doors shall be operated by bars or other panic hardware device. Single leaf doors rather than double are recommended because hardware now available is more satisfactory for single than double doors. If glass is used in doors, it shall be wired glass.

Bars of other panic hardware devices shall be of types that are applied to the surface of the door.

The bar or releasing device should extend for three-quarters of the width of the door at the latch side.

The bar or releasing device should have a projection of not more than 3½ inches from the face of the door and the space between the bar and the door should be closed or filled with solid panel allowing not more than 1 inch between the back of the panel and the surface of the door.

Upon this panel should be engraved or embossed in large letters "PUSH."

Rules for Determining Required Exits

2135. Exits From Upper Stories. For floors above the first, stairways (or ramps, see Section 2136) shall be provided conforming with the preceding general requirements, in accordance with the following formula:

B—Construction—Where
- Ordinary ..... B—4
- Fire-Resistive ..... B—5

C—Protection of Vertical Openings—
(All vertical opening must be protected except as requirements are modified for existing buildings by Sec. 2159.)
- Open Stairs ..... C—2
- Enclosed Stairs ..... C—5

D—Sprinkler Protection
- Unsprinklered ..... D—1
- Sprinklered ..... D—2

E—Horizontal Exits (See Section 4)—
- None ..... E—2
- One ..... E—3
- Two or more ..... E—4

G—Gross area of each floor in square feet. For auditoriums and gymnasiums G-6 X net auditorium area. A separate calculation should be made for auditorium and gymnasiums and exits provided accordingly, in addition to those required for the rest of the building.

H—Number of stories.

Note—This provides exits in sufficient number to empty a three-story fire-resistive building with enclosed stairways in about three minutes at the rate of 45 persons per minute per unit of stair width, and assuming that one-third of the exits are not used, the population being determined as follows:

(Continued on Page 82)

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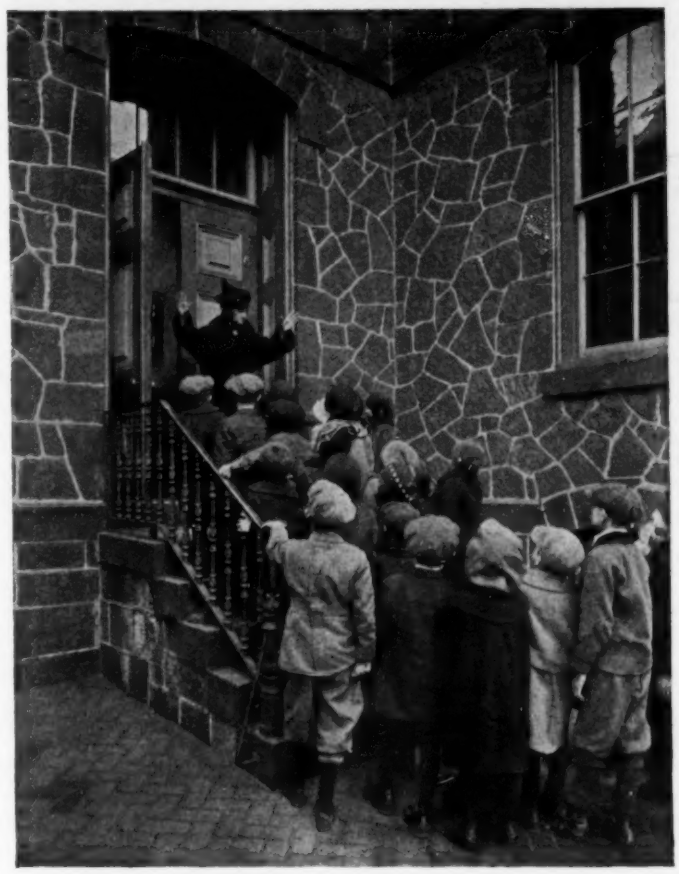

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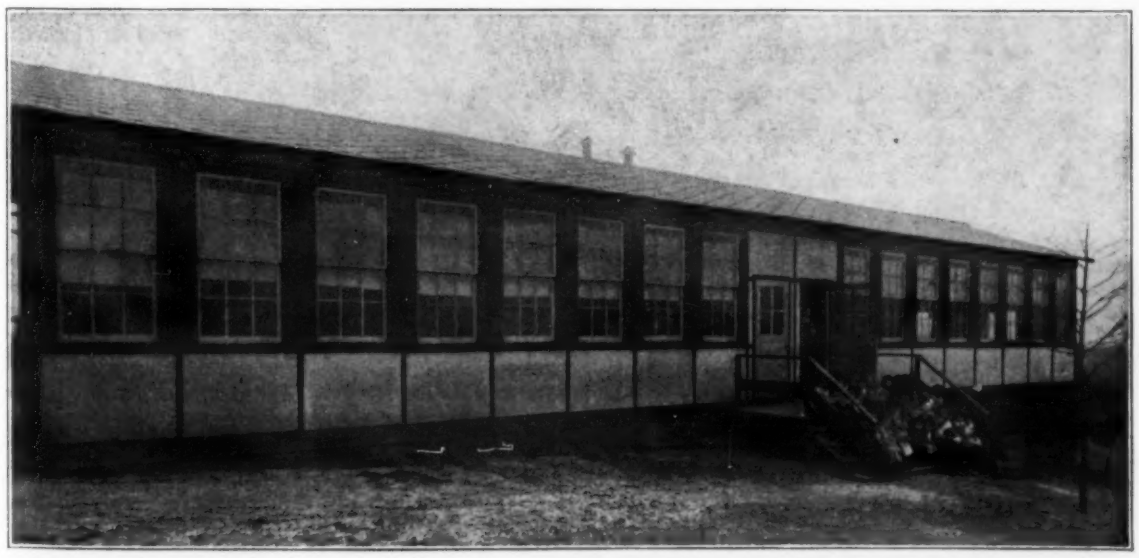

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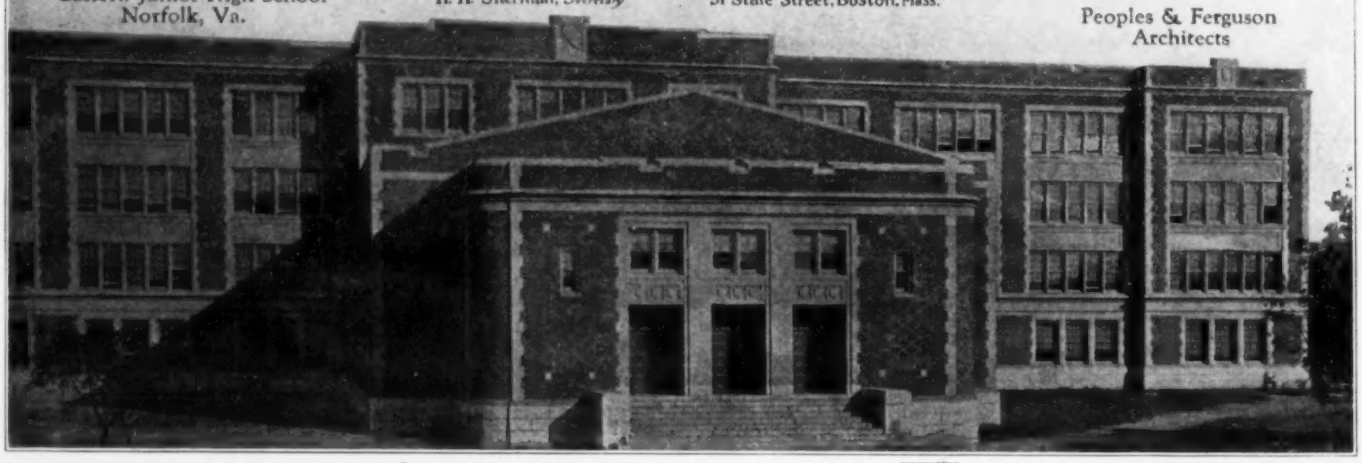

GRANITE

(Continued from Page 80)

Divide gross area by 2 to get net area used for educational purposes and divide by 20 to get number of occupants. (This provides for average population of most crowded schools as shown by counts of typical schools, and is in substantial agreement with various state laws governing school construction.)

Auditoriums and gymnasiums which may be used for auditorium purposes are figured separately on the basis of one person for each 6 square feet of net floor area.

The numerical values of the several factors above indicate the variation in the stair capacity required for the several conditions of construction and protection. E. G., the values of B indicate that, other conditions being identical, a building of ordinary construction requires 25 per cent more stairs than a fire-resistive building. A building having open stairways requires 150 per cent more stair capacity than a similar building with open stairs, a sprinklered building needs only half as many stairs as an unsprinklered building, one standard horizontal exit decreases the required stair capacity by one-third, etc.

This formula is derived from the general formula Section 2013, the school being taken as an occupancy of low hazard.

2136. Where down ramps are substituted for stairs (Section 2129) one unit of ramp width shall be considered equivalent to 1½ unit of stairway width. (Extra credit does not apply to up ramps.)

2137. The required exits specified by Section 2135 shall lead by a direct line of travel to the ground.

2138. A unit of stairway width shall be 22 inches. All stairways shall be at least 2 units wide. A unit of door width shall be 22 inches but a 40-inch door may be accepted as 2 units.

2139. All stairways from upper floors shall be continuous from the top floor to the ground level.

2140. Basement Exits. The basement (or "ground story") shall be treated the same as an upper story in accordance with section 2135, except for basements H-3, and exits shall be provided accordingly, either stairs leading to the first story or doors leading directly out-doors.

2141. First Floor Doors shall be provided as follows:

a. One unit of door width for each unit of stairs from upper floors.

b. One additional unit of door width for each unit of required stairs from basement.

c. One additional unit of door width for each 5000 square feet or fraction thereof of gross area of the first floor.

d. One additional unit of door width for each 900 square feet or fraction thereof of floor area of auditoriums and gymnasiums on the first floor.

2142. Example. Assume a three-story and basement fire-resistive building having stairs enclosed, no horizontal exits and no automatic sprinkler protection, 60 ft. x 125 ft. (= 7500 sq. ft. per floor). Assume that there is an auditorium, 50x60 ft. on the first floor. Assume that there are no independent exits from basement and that the occupants of the basement must use first floor exit doors.

Stairs from upper stories will be, substituting in the formula Sec. 2135:

$$\text{No. units stair width} = \frac{7500 \times 3}{120 \times 5 \times 5 \times 1 \times 2} = 3\tfrac{3}{4}.$$

Therefore, 2 2-unit stairways will be required. Stairs from basement (see Section 2140) by a similar calculation (H-3 in each case) will be 2 2-unit stairways.

Street floor doors (see Section 2141) will be

a. To serve stairways from upper floors ..... 4 units.

b. To serve stairways from basement 4 units.

c. To serve first floor, $\frac{7500}{5000} = 1.5$, or 2 units.

d. To serve auditorium, $\frac{50 \times 60}{900} = 3.3$, or 4 units.

Total street floor doors required..14 units.

This street floor door requirement may be satisfied by providing 7 40-inch doors or other equivalent arrangement. The doors (a) and (b) should be located at the stairs, the doors (d) should lead directly from the auditorium. The doors (c) may be at any convenient location, so disposed that the requirement for two ways out of every floor area will be satisfied.

Auditoriums

2143. For auditoriums and gymnasiums exit facilities shall be provided independent of those required for the other part of the building, all in general conformity with the exits hereinbefore specified for other parts of the building.

Note—This rule does not prohibit operating communications between auditoriums and other parts of buildings.

A subsequent section of this Code on places of public assembly will apply to school auditoriums when completed.

Fire Alarm

2144. Every building shall be equipped with a fire alarm system in accordance with section 10.

Lighting.

2145. Artifical lighting of not less than one foot candle intensity shall be provided in all stairways and exits and in passageways appurtenant thereto. It shall be supplied preferably from an independent source or from a connection extending back to the main service entrance for the building, so that failure of room lighting from internal causes will not affect the exit and emergency lighting.

Note—For details of lighting see A. E. S. C. American Standard Code of Lighting School Buildings.

EXISTING BUILDINGS

2146. It is recommended that existing buildings be made to conform to the foregoing requirements as far as possible. The following requirements for existing buildings afford a minimum degree of safety for such buildings. Each building should be taken as a special case to be considered on its own merits. In general it will be found that the installation of automatic sprinklers will be the most satisfactory method of compensating for construction deficiencies in existing school buildings.

2147. Existing building shall comply with all the foregoing requirements for new buildings except that the provision of Sections 2106-2118 may be waived in so far as permitted by Sections 2148-2152, and other exceptions given in Section 2153-2158 apply.

2148. As minimum requirements for existing buildings of two stories or higher where hollow wood studded wall and partition construction is used, the interior wall and ceiling finish shall be reasonably smoke-tight; board floors on wood joists shall be double with fire-retarding felt or paper between the upper and lower flooring, except that existing tight double

(Continued on Page 84)

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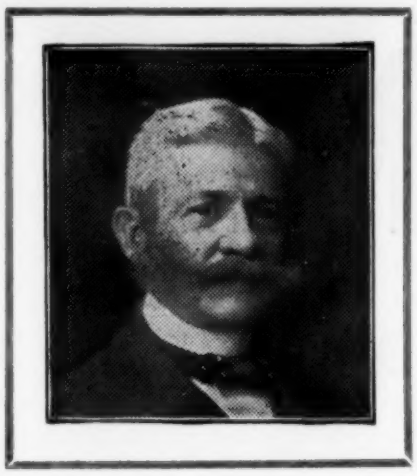

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(Continued from Page 82)

floors may be accepted without fire-retarding felt or paper. For such buildings of over two stories the interior wall and ceiling finish shall be plaster or other finish equally smoke-tight and fire-retardant. Wood or other combustible finish shall cover only minor portions of the wall surface (e. g. wood stair soffits and wood wainscoting prohibited) and where used, shall have plaster or equivalent backing. (This supersedes requirements of Section 2109.)

2149. Boiler or heater rooms or rooms used for fuel storage shall in all cases have incombustible or fire-restrictive enclosure walls and floors, with self-closing fire doors protecting all openings thereto, except those in exterior walls, and ceiling protection of cement or gypsum plaster on metal lath or equivalent. Interior windows between boiler or heater rooms or rooms used for fuel storage and corridors used for exits shall be wired glass in stationary sash.

2150. Three-story non-fire-resistive buildings, may be accepted provided basements and rooms used for manual training, domestic science, kitchens, laboratories, shops, boiler or heater rooms, rooms used for fuel storage, or similar occupancy, have walls and ceilings finished on the inside with cement or gypsum plaster or metal lath or equivalent fire and smoke-resistive coverings and all hollow spaces in combustible floors, walls, and partitions above and around them fire-stopped with incombustible material, or if rooms used for such occupancies are completely protected by an automatic sprinkler system installed in accordance with National Fire Protection Association regulations, and properly maintained.

2151. Four-story non-fire-resistive buildings may be accepted if basements are completely protected by automatic sprinklers and rooms of occupancies listed in Section 2150 and the ceilings under and the walls around the corridors used for exit, are finished on the inside with cement or gypsum plaster on metal lath, or with equivalent fire and smoke-resistive finish and all hollow spaces in combustible floors, walls and partitions around and above are firestopped with incombustible material; or, if the whole building below the top story is completely protected by an automatic sprinkler system installed in accordance with National Fire Protection Association regulations, and properly maintained.

2152. Five-story non-fire-resistive buildings may be accepted if rooms of occupancies listed in Section 2150 and the ceilings under and the walls around the corridors used for exit, are finished on the inside with cement or gypsum plaster on metal lath, or with equivalent fire and smoke-resistive finish, and all hollow spaces in combustible floors, walls and partitions around and above are fire-stopped with incombustible material; and in addition the entire building below the top story is completely protected by an automatic sprinkler system installed in accordance with National Fire Protection Association regulations and properly maintained.

2153. Auditoriums and gymnasiums (see Section 2116), which according to Section 2117 and Section 2118 must be treated as auditoriums, may be allowed above the first floor, but not above the third floor, if provided with proper exits as specified herein, and if the entire building up to and including the auditorium or gymnasium story is of fire-resistive construction, or of ordinary construction with all walls and ceilings finished with cement plaster on metal lath or equivalent fire and smoke-resistive finish and all hollow spaces in walls and ceilings firestopped with incombustible material; or if in addition to the minimum structural requirements of Section 2148, the whole building below auditorium or gymnasium level is protected by an automatic sprinkler system, installed in accordance with National Fire Protection Association regulations, and properly maintained.

2154. If existing exits are insufficient according to rules herein the required stair capacity may be obtained by adding Class A Outside Stairs (see Section 2), or Class B Outside Stairs may be accepted if already installed.

2155. Stairways shall not be rejected if not located adjoining outside walls as per Section 2124 if they comply with other requirements.

2156. Stairs may be Class B instead of Class A specified in Section 2128. (See Section 126.)

2157. Stairs shall be enclosed with enclosures of Type No. 4 (Section 145) or better, as follows:

Note. It is strongly advised that automatic sprinkler equipments be installed to protect the entire building, including the top story, although sprinklers may be omitted from the top story without seriously affecting the safety of occupants.

(a) All basement stairways.

(b) All stairways in buildings of ordinary construction.

(c) Stairways in fire-resistive buildings three stories or more in height.

2158. A 42-in. stairway may be accepted as 2 units and a 34-in. stairway as 1½ units (instead of requirements of Section 2140).

BUILDING AND FINANCE

—A school building program to give immediate relief to 54,000 Chicago school children housed in portable buildings, and to take care of an anticipated increase in population, is contemplated by Supt. William McAndrew. A census of the regions where school facilities have been outgrown has been completed and each building has been placed in the order of its urgency. The construction work is to be begun under the direction of Mr. Edgar W. Martin, supervisory architect. To show the urgent need of more school buildings, it is pointed out that the 25 new structures now in course of completion will accommodate approximately 18,000 children. At the same time there is an estimated normal increase of 20,000 pupils each year.

—New Kensington, Pa. The school millage has been fixed at 22 mills for the year 1924-1925.

—A school building survey conducted recently at Paterson, N. J., shows the need of five new buildings to replace outgrown structures. It is the purpose of the board to build two schools each year until the housing needs are adequate.

—Cottage Grove, Ore. Plans for a school building program have been made with the decision to call a bond issue election. The details of the building program will be undertaken after the bond issue has been disposed of.

—The new $600,000 school in course of construction at Wilmington, Del., will be named the Thomas F. Bayard School, in honor of the man who served as secretary of state under President Cleveland and who was a native of Delaware. Mr. Bayard was born in Wilmington in 1828 and died in that city in September, 1898. The school has been presented to the city by

(Continued on Page 86)

The new place of music in school work—

the Miessner a necessity

"Music for Every Child," the national slogan of music educators, reflects the growing importance attached to a more complete musical education for American school children. Music engenders ideals expressive of the best in life. Every child needs music. It rightfully belongs in the curriculum of every school and should rank with other important subjects.

Music has been brought to thousands of school children through use of the Miessner piano, a small piano weighing only half as much as an ordinary upright, yet possessing a beautiful sweet singing tone. Every school which has installed one or more Miessners has found the investment paid a hundred fold, for music recreates and freshens a child's mind—lessons seem to require less work.

Class Instruction in Piano

To give equal advantages to poor and rich children alike, class piano instruction is now gaining increasing recognition as a regular part of the school program. Ten to twenty children taught at one time by one teacher at one-fifth to one-tenth of the cost to one pupil. This has been made possible with the little Miessner. The illustration shows such a class in session.

Your school can send out pupils richer in training and knowledge through musical instruction throughout the grades. And the Miessner Piano because of its easy portability, is the logical and economical musical instrument for schools. Built and backed by W. Otto Miessner, who thoroughly understands school needs.

Let the Miessner prove to you its excellent qualities and special fitness for school music instruction. Mail the coupon or a letter requesting details of the special price made to schools, and the 10-day free trial plan. Have the Miessner ready for Commencement exercises.

MIESSNER PIANO CO.
118 Reed St., Milwaukee, Wis.

MIESSNER

THE LITTLE PIANO WITH THE BIG TONE

Miessner Piano Co.,
118 Reed St.,
Milwaukee, Wis.

GENTLEMEN: Send me, without obligation on my part, a copy of the descriptive booklet on the Miessner. Also send details of your ten-day free trial plan, and the special low price made to schools.

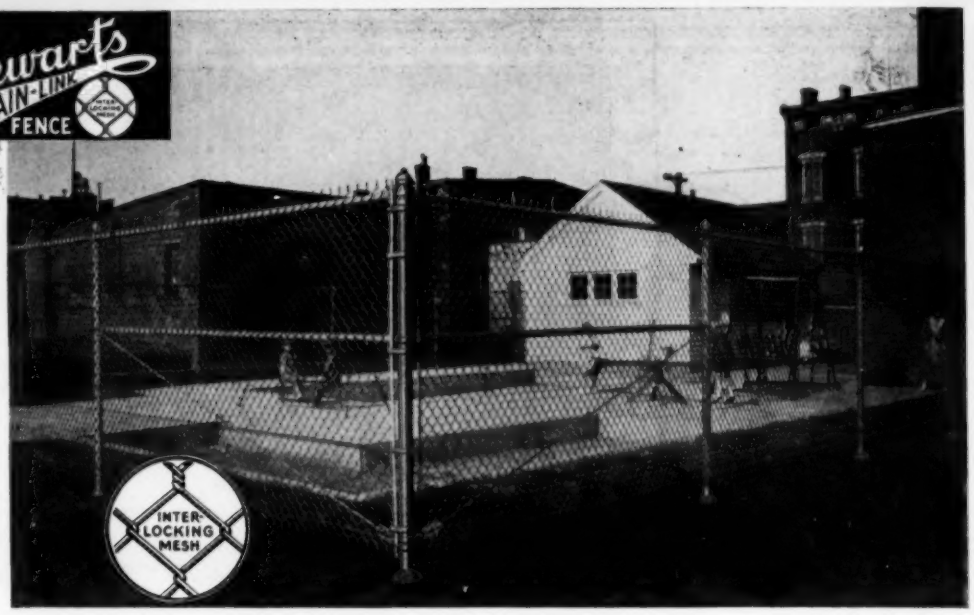
Name..... Position.....

Address.....

City..... State.....

School.....

The Miessner Player is invaluable in playing the composition of great musicians. Let the children gain a true conception of the world's finest music.



Saves the mothers from worry

Mothers' minds are relieved of a load of worry when the school grounds are enclosed with a Stewart Chainlink Wire Fence. They know then that play periods are not danger periods; that their children can play and romp as safely as in their own backyards.

And when school is dismissed, there is no running across streets in all directions, as the children seek the shortest cuts home. The children leave in an orderly manner through the controlled gateways or exits, and can be safely guarded against all traffic accidents.

Not only does a Stewart Chainlink Wire Fence give safety insurance, but it is a sound investment, as the fence lasts for a lifetime. The posts, made of the best tubular steel, have unusual torsional strength; the fittings are not cast, but are made of pressed or forged steel of special design; the fabric is permanently galvanized by the new hot-dipping AFTER WEAVING process. A Stewart Fence never has to be replaced.

Through local distributors, Stewart Service, which takes care of all erecting problems, is available everywhere. Estimates furnished without obligation.

Send for catalog and complete information.
Address Wire Fence Division.

The Stewart Iron Works Company, Inc.

"The World's Greatest Iron Fence Builders"

420 Stewart Block **Cincinnati, Ohio**

(Continued from Page 84)

Mr. P. S. DuPont through the Delaware School Auxiliary.

—Discrimination by district school boards against the appointment of teachers, or the retention of teachers already employed, because of their religious belief, is unlawful, according to Governor Silzer of New Jersey. In a communication to State Commissioner John Enright, the Governor declared he had received complaints that such discrimination had been practiced. He pointed out that if each community should be allowed to discriminate against an applicant because of his religious belief, it would not be long until the rights guaranteed by the constitution would be lost.

—Mansfield, O. The board has named the new building the Osburn School, in honor of the late Miss Belle Osburn.

—Denver, Colo. The contract has been let for the erection of the East Denver High School which is to cost $1,058,314. The building will house 1,800 students and will be completed by September, 1925.

—Fredericksburg, Va. Citizens and school patrons of Spotsylvania County came to the rescue of the schools and provided funds necessary to keep the schools in operation for the full term. A lack of funds had threatened to close the schools early in April.

—Of 31 leading cities with a population of 100,000 or more, Spokane ranks tenth in the per capita expenditure for the education of each individual student, according to the March Congressional Record, where the names of cities were mentioned in a debate on a bill to increase teachers' salaries in the District of Columbia. The figures indicated that Spokane's school children are being educated at a yearly cost of $96.50. Philadelphia, San Francisco, Chicago, Minneapolis, Atlanta and St. Louis all have a lesser annual expenditure than Spokane.

Figures were also given showing that Tacoma spends more money on education than Washington, D. C., where the per capita cost is $77.98. Tacoma's annual expenditure is $87.67. Walla Walla is shown to rank ahead of Washington with an annual expenditure of $89.58 in a list of forty cities with a population ranging between 10,000 and 30,000. Bozeman, Mont., was shown to be spending $109 and Pendleton, Ore., $107. All western cities were given high ranking places in the discussion of salaries.

—Berkeley, Calif. The financing of a $2,000,000 school building program is to be attempted through a bond issue in lieu of direct taxation over a period of years. The decision was made by the board after every possible means of financing had been considered.

—One-fourth of the rural school districts of the state, and possibly one-third are operating at a loss, according to State Supt. Charles Lee of Missouri, who urges consolidation of districts having small enrollments. Of the 9,242 rural districts of the state, about 1,077 have enrollments of fewer than fifteen each, while 2,589 have enrollments of between fifteen and 25 each. No rural school, it is pointed out, can be operated economically with less than 25 pupils. It costs about $10 per month, per pupil, with an enrollment of ten.

—The cornerstone of the Warren G. Harding High School at Philadelphia, Pa., was laid on April 26th, with a large gathering of school and fraternal organizations present.

—Minneapolis, Minn. A total of six junior high schools and one senior high school must be built in the next five years, to meet an increased enrollment by September, 1929, according to a recent survey conducted by Supt. W. F. Webster, Asst. Supt. L. N. McWhorter, Business Supt. G. F. Womrath and Newton Hegel, supervisor of attendance.

A solution of the overcrowding problem in both junior and senior high schools and grade schools is sought in the program to be based on the survey, showing the building needs of the next five years. At the present time it is only possible to meet the most pressing needs in housing each year.

—The Julius Rosenwald Fund is to supply moneys for the construction of 29 schools for negroes in Alabama during the year beginning July first. The total amount which will be given to the state from the fund during the year will be $22,900. Twenty-five of the buildings will be for school purposes and will consist of from one to six-teacher schools.

During the coming fiscal year, Mr. Rosenwald, the Chicago philanthropist, has set aside $450,000 for negro rural school projects in fourteen southern and western states. This is in addition to a $25,000 reserve fund and more than $25,000 for administrative expenses, making a total of half a million dollars for the entire appropriation.

—San Diego, Calif. The school board has selected sites for the Point Loma High School and the Woodrow Wilson Junior High School. The Point Loma school will accommodate 800 students and will be erected at a cost of $200,000.

—Grand Rapids, Mich. President George A. Davis of the school board has pointed out that the board must not fail to heed the demands of the public for decreased taxes and urges caution in the addition of new activities to the schools. Mr. Davis recommends a policy involving efficient and economical conduct of present activities and curtailment of the school building program.

—The Kane County School Officers' Association of Illinois has passed resolutions calling for a revaluation of property by the state tax commission and an increase in the appropriation to the state school fund to equal 25 per cent of the total expense for common schools.

—Sioux City, Ia. The average annual cost of educating a pupil in the schools is $65.84. A comparative study made by the school officials shows that Sioux City is tenth in the list of thirteen larger Iowa cities in the matter of millage tax levy for education. Sioux City's levy is 66.6 mills.

—Louisville, Ky. With 1,501 more students registered than in 1923, the school board is faced with a great demand for more accommodations. Grade buildings have become antiquated, or badly in need of repair, and the high school is bursting with more than 2,000 students.

—The school board of Indianapolis, Ind., has rescinded a rule passed last November, making compulsory the retirement of school teachers after 45 years of service.

—St. Louis, Mo. The tax rate for school purposes has been increased four cents on each $100 valuation in order to meet the growing needs of the city schools.

(Continued on Page 88)

CALISTHENICS *for* SCHOOLS

To Stimulating and Delightful Music

Victor Health Exercises in the School Yard, Passaic, N. J.

SCHOOLS all over the country are finding the Victor Health Exercises ideal for their calisthenics. The music removes the monotony of the countings of the old formal gymnastics, and stimulates a more whole-hearted participation in exercise. Daily physical training is required by law in many states, and the Victor Health Exercises are assisting thousands of teachers to comply in a pleasant and satisfying way.

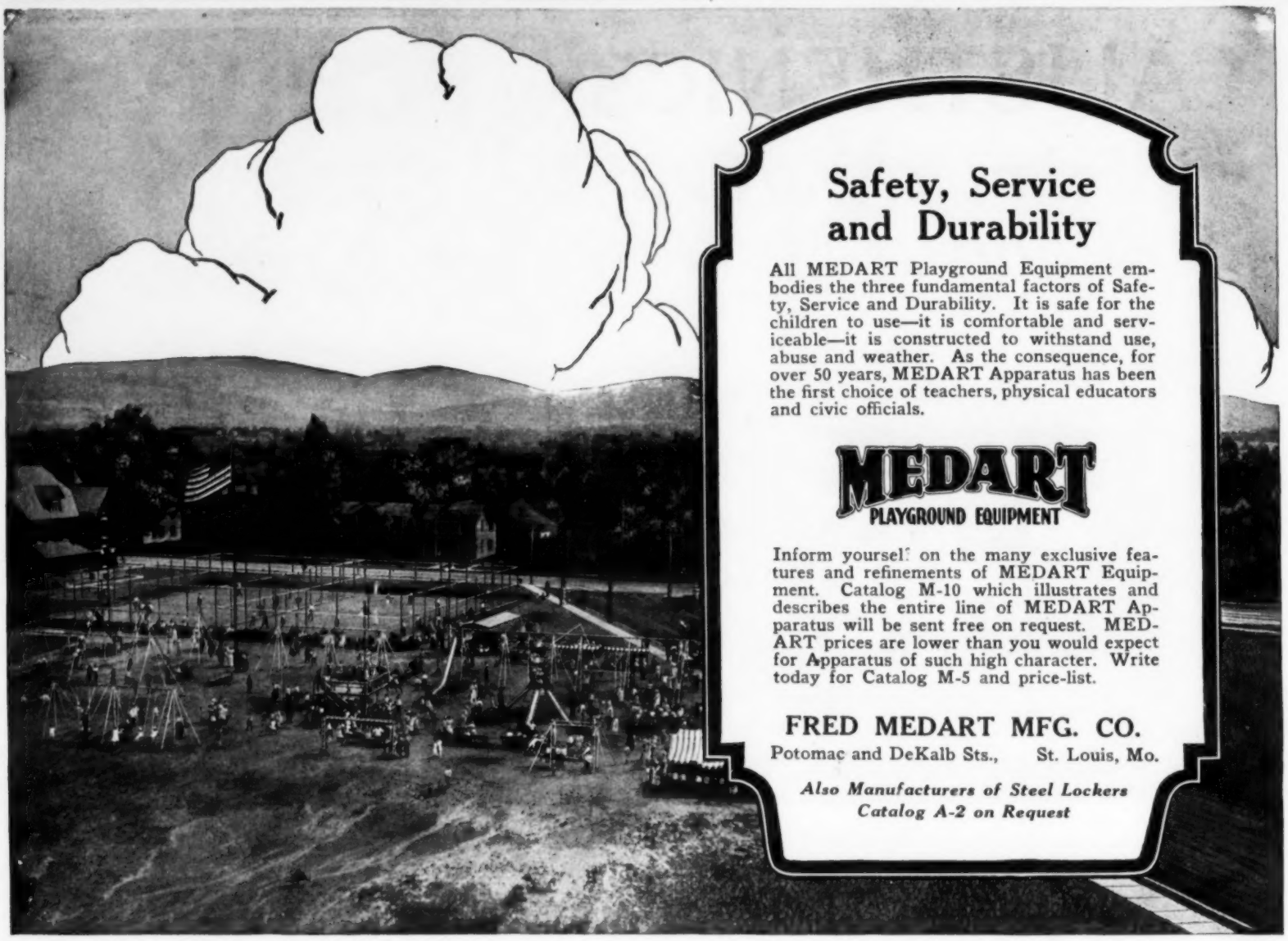
The exercises have been planned by an expert physical culturist, and represent a "balanced ration" which brings into play at one time or another all the muscles of the body, stimulating its every normal function, improving the physique, and quickening the mind.

The three records (18914, 18915, 18916) are packed in a neat container with illustrations of the various exercises, list price $3.00 a set. Call upon your nearest dealer in Victor products for a demonstration. For schoolroom, playground, and gymnasium this health set fills every need.

FREE—Just off the press, a new revised edition of *The Victrola in Physical Education, Recreation and Play*, giving full particulars on the use of the Victrola in folk dancing, marching, drills, rhythms, games, etc. Ask your dealer for a copy or write direct to

Educational Department

Victor Talking Machine Company, Camden, New Jersey


Safety, Service and Durability
All MEDART Playground Equipment embodies the three fundamental factors of Safety, Service and Durability. It is safe for the children to use—it is comfortable and serviceable—it is constructed to withstand use, abuse and weather. As the consequence, for over 50 years, MEDART Apparatus has been the first choice of teachers, physical educators and civic officials.
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PLAYGROUND EQUIPMENT
Inform yourself on the many exclusive features and refinements of MEDART Equipment. Catalog M-10 which illustrates and describes the entire line of MEDART Apparatus will be sent free on request. MEDART prices are lower than you would expect for Apparatus of such high character. Write today for Catalog M-5 and price-list.
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Potomac and DeKalb Sts., St. Louis, Mo.
Also Manufacturers of Steel Lockers
Catalog A-2 on Request

(Continued from Page 86)

—Boise, Ida. The school district has voted an additional five mills for the support and maintenance of the schools during the next year. The action brings the total levy to sixteen and one-half mills, which includes 3½ mills for bond interest and redemption.

—Kelso, Wash. The school district has voted an additional ten mills for school support. The action makes it possible for the board to levy up to the limit of twenty mills.

—Piqua, O. The school board has been notified that school building regulations have been violated at three buildings by the absence of fire escapes. The board lacks the funds with which to provide these improvements.

—The largest consolidated school in the country will be erected this summer at Tipton, Ia., at a cost of $285,000. The building will be three stories high, will contain an auditorium, gymnasium and study rooms and will accommodate 1,000 pupils. The auditorium alone will seat 1,100 persons.

—Houston, Tex. Construction work was begun on April 10th on the Woodrow Wilson School. The building will contain nine rooms and an auditorium and will cost $80,000.

—According to a recent report of the state education department, Virginia has 354 standard four-year high schools and 33 junior high schools. It is expected that these figures will be considerably increased before the close of the school year.

—The Salem Hyde School is the name given to the new building to be erected in the fourth ward at Syracuse, N. Y.

—In discussing the subject of cost reduction, Superintendent R. G. Jones of Cleveland, Ohio, suggests larger high school units, an increase in the size of classes, and better teaching. He holds that through an adequate research major reductions can be achieved.

—The report of the New Bedford, Mass., school committee shows that the population of that city has grown from 40,000 in 1890 to 121,000 in 1920. It also shows that the rate of taxation is $27.80. The school population has been increased to 25,000 while the school property is estimated at something over six million dollars. Superintendent Allen P. Keith provides a comprehensive review of the educational labors engaged in by the schools.

—The school board at Lubbock, Tex., has called an election to vote $125,000 in bonds for the new south wing of the high school. The new Carter school has been completely occupied. The enrollment has grown from 2,065 to 2,840, an increase of nearly 800 pupils in one year.

—Corsicana, Tex. Four new schools are in process of erection and will be completed and occupied within the next few months. In the list are included a high school to cost $325,000; a colored high school to cost $90,000; an elementary white school to cost $125,000 and one to cost $90,000. The buildings were planned and are being erected under the supervision of Mr. William B. Ittner of St. Louis, Mo. The completion of the present building program will make possible a completely modern school plant.

—The school board of Knoxville, Tenn., has approved a recommendation of Supt. W. E. Miller providing for a survey of the school building plant. The results of the study are to be made the basis for a bond issue to cover the immediate building needs as well as for those of the future.

It is proposed that the survey report shall present a clear analysis of the problem as well as complete recommendations for its solution. This should comprise a study of the present school congestion, the estimated future housing needs and needs of the present plant, plans for re-zoning for larger and fewer school centers, types of building plans, number and kind of schools.

The school board is assisted in the work by Mr. Wm. B. Ittner of St. Louis, Mr. Lee Byrne of the University of Iowa, and by Mr. W. E. Putnam of Birmingham, Ala.

—Brattleboro, Vt. A sixteen-room grade building, with teachers' room and library, is contemplated. The building will be erected at an estimated cost of $175,000. A bond issue to cover the cost of the structure has already been approved by the school district.

—The Shadyland, Texas, independent school district is now completing a new high school building costing $50,000.

—The town of Falmouth, Mass., will begin the construction of a one-storied high school. The building will be in three units. The first of these provides eight class rooms, the second, a gymnasium 126 by 44 feet, and the third an auditorium seating 527 students.

—Corfu, Washington, presents a distressing situation. Owing to the abandoning of farms, three schoolhouses have dwindled to one with twelve pupils and two teachers remaining. Three children are hauled seven miles and two four miles.

The citizens voted on April 29th on a proposition to appropriate $220,500 for new school buildings. The improvements call for a junior high school building, a new central heating plant and the remodeling of two grade schools, together with the provision of a proposed athletic field.

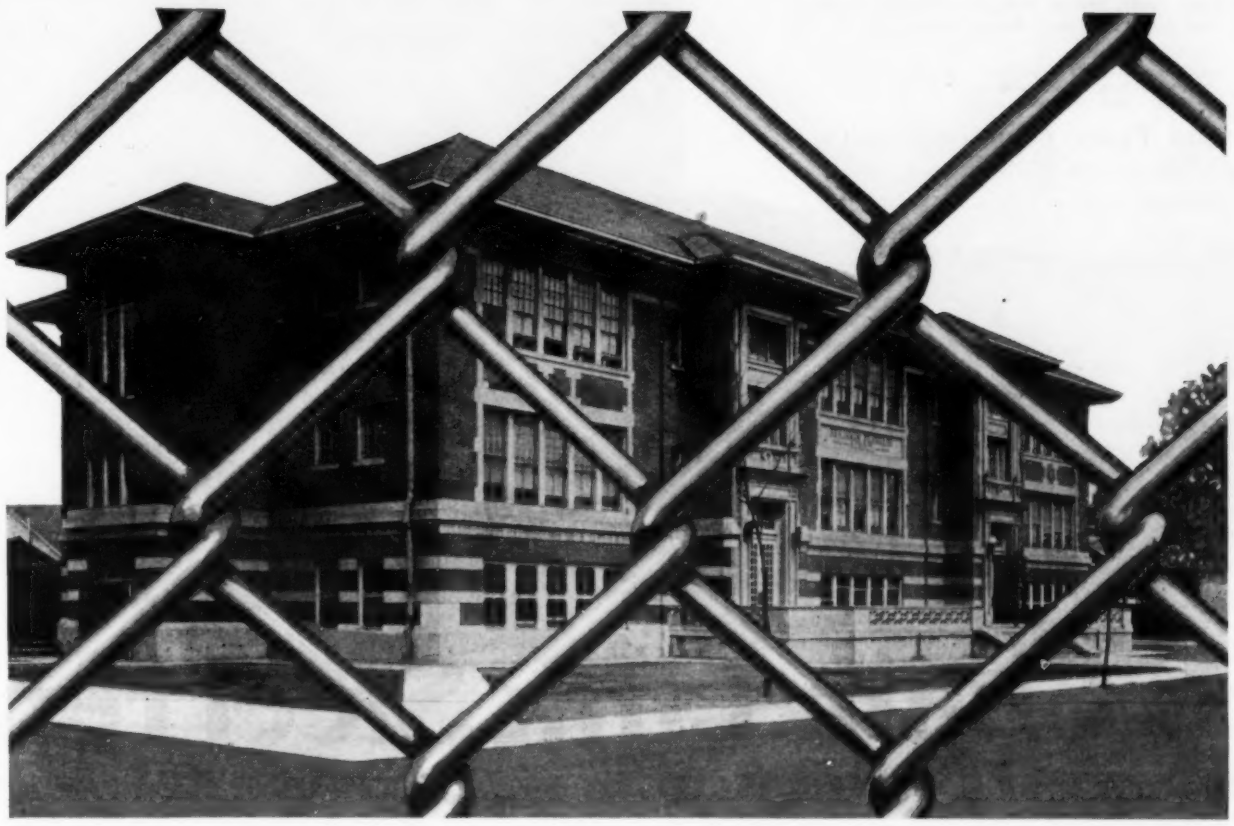
—The city commission of Birmingham, Ala., has approved a $3,500,000 bond issue for school buildings. The bond issue has been submitted to a vote of the citizens. The agitation for the bond issue followed a survey of school building needs made by the board upon the recommendation of Supt. C. B. Glenn.

—Mr. G. E. Everett, supervising principal of the city schools at Lakeland, Florida, has announced the erection of a sixteen-room ward building and a fourteen-room addition to the high school building. The total enrollment is 3,200 while that of the high school is 682.

—The Borough of Cliffside Park, N. J., is five years behind its needs in respect to school housing. It is more than eight years since any additions have been made to the school plant and in that time the number of children has grown from 1,071 to 1,740, an increase of 669. A circular outlining the school building program for the entire system has been prepared and will be sent to each voter in the Borough. The citizens are asked to recognize the great need at the present time and to approve the proposed Hudson Heights School.

—Casper, Wyo. The school board has approved plans for a new high school to cost $700,000. During the coming summer from $300,000 to $400,00 will be expended in new school building construction.

Durable Fence



HERE'S protection for school property at less cost per year than ever before. The ***uniform,*** super-heavy zinc coat that covers Page Fabric is approximately ***4 times as thick*** as that on ordinary fence. It means longest life, a permanent economical fence.

Give your administration of schools the benefit of Page Protection. Unclimbable, flexible, Page protects pupils at play, keeps them within bounds, breeds orderliness and promptness — relieves teachers and school authorities of extra cares. There is a Page Distributor near you who will furnish plans and estimates promptly — write for his name and address, and for the Page Fence Book, showing typical school installations.

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PROTECTION FENCE

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An Athletic Field Must Be Enclosed

—and with a non-climbable, non-breakable fence. The grounds and equipment must be safe from heedless vandalism when not in use—they are too valuable to leave unguarded. Without a good fence you cannot collect on "paid admission" days. The fence you need is a 7 ft. high chain-link steel fence with a barb-wire overhang. Now in 1924 you can have wire fence fabric *galvanized after weaving*, the longest lived fence material on the market.

Afco Catalog 24 describes this and other School and Athletic Field Fences. Ask for your copy.

American Fence Construction Co.
130-132 West 34th St., New York City

This illustration shows the entrance to Baker Field, Columbia University. It is enclosed with Afco non-climbable Fence.

Afco Chain Link Steel Fence
assures real protection at very reasonable cost

SCHOOL BOARD NEWS

—The city attorney of Dallas, Tex., has ruled that Mr. E. H. Steger may not serve as a member of the board of education and continue to hold his contract with the city for supplying hay and grain. A provision of the city charter prevents any business man holding a contract with the city from being a member of the board.

—New Castle, Pa. The school board has readopted its present regulation permitting four dances each school term of nine months by pupils of the high school under definite regulations. Under the rules dances must close promptly at 11:30 o'clock; they must be approved by the principal and faculty, and they are open only to students and their parents.

—The school board at Osage, Ia., would like to know who is guilty of "stacking" the high school assembly room. Much destruction was done, records were mutilated or lost and the work of the school greatly hampered.

—Thomas J. Mahon, a member of the school board at Milwaukee, Wis., who was appointed to fill the unexpired term of a judge on the civil bench, cannot remain a member of the board, according to a decision of the city attorney. The judge was appointed by the governor to sit on the civil bench until July first, when the full term starts.

—The school board of Hope Township, Warren County, New Jersey, has been ordered by the state to provide transportation for four children who live two and six-tenths miles from any school building. The children range from 6 to 11 years in age and were obliged to travel over hilly and unimproved roads.

—The New York State Senate has passed a bill which provides a salary of $6,000 for each of the five members of the Buffalo school board. The bill further provides for election of the members instead of appointment by the mayor as at present. It is not expected that the bill will be passed by the house.

—A. M. Booth was re-elected member of the Huntsville, Ala., board of education. The city council refused to enact a rule rendering eligible to school board membership only those having children in the schools.

—The school board of Providence, R. I., nas gone on record favoring that part of the Strayer plan which provides for fiscal independence. It opposes the plan as a whole because it makes no provision for placing in the sole control of the school committee the selection of school sites and the erection and maintenance of school buildings as the same may be required to meet increased attendance, and relieve congestion in the schools. The board also favors the retention of the ward representation plan.

—President Ortquist of the Minneapolis, Minn., board of education has urged a five year building program and has induced the various city heads to enter into a conference on the subject.

—Syracuse, N. Y. Demanding higher wages, 120 plasterers working on new schools for the city went on strike recently. The men were receiving $10 and $11 a day and demanded $14 a day. A compromise was reached and all went back to work.

—Hartford, Conn. The school board has voted to advance the time of opening and closing school sessions one hour. The change became effective the last Sunday in April and ends the last Sunday in September.

—Dallas, Tex. An amendment to the city charter has recently been proposed to prevent the removal of an old board and the substitution of an entirely new body unacquainted with school affairs. A committee has been appointed by the mayor to study the problem as worked out in other cities and to formulate a measure increasing the present terms of the school board members from two to four or six years. To insure a continuance in office of a majority of old members, overlapping memberships are provided calling for the election of new members every two years.

—Kenton, O. The school board has placed the schools on Eastern time. The change is in line with a similar policy on the part of factory managers and store owners.

—Adrian, Mich. The school board has rejected a proposal to expend about $225,000 for a new elementary school and a number of four-room units to present buildings.

—Chicago, Ill. In an effort to place the school board on an efficiency basis, a bill will be introduced in the state legislature making the office of school board president a salaried office. Under the plan, the president would devote practically all his time to school work and would be paid a salary of $15,000 a year. The need for such a change was made apparent at the recent meetings of the board when the 1924 school budget was in process of completion. Hundreds of thousands of dollars, it was pointed out, would be saved by increased efficiency and the personal supervision of the president.

—The Massachusetts house has "laughed out of court" the proposed bill seeking to define the powers and duties of school committees and the duties of superintendents of schools. Included in the bill were many changes in present statutes governing school committees.

—The Cincinnati, Ohio, board of education has been criticized for failure to publish an annual report of its operations with the result that the state examiner made an examination of the books and records of the board. The examiner found everything correct and was "disinclined to offer adverse criticism." He added the following recognition of the office force: "They have established a record of accuracy, efficiency and economy in their conduct of the clerk's office that is well worthy of notice by the board of education and by the tax-paying public."

—In the school board election conducted at Springfield, Ill., some of the candidates indulged in aggressive campaign literature. One of the candidates, in deploring the dropping of special studies, said: "The housewife would not give up her electric sweeper or washing machine or other labor saving methods which have replaced the old back breaking methods of performing her household duties. Our

(Continued on Page 93)

THE FUN-FUL LINE

PLAYGROUND EQUIPMENT

FUN-FUL Playground Equipment costs more than other makes, yet it is used by more schools than any other.

School heads are rightfully cautious when selecting Playground equipment. A few dollars saved in buying unsafe apparatus may mean serious injury to a child in addition to heavy damages that must be paid.

Over 130 reputable school supply houses and other distributors sell this line in the U. S.

Largest manufacturers of Playground Equipment

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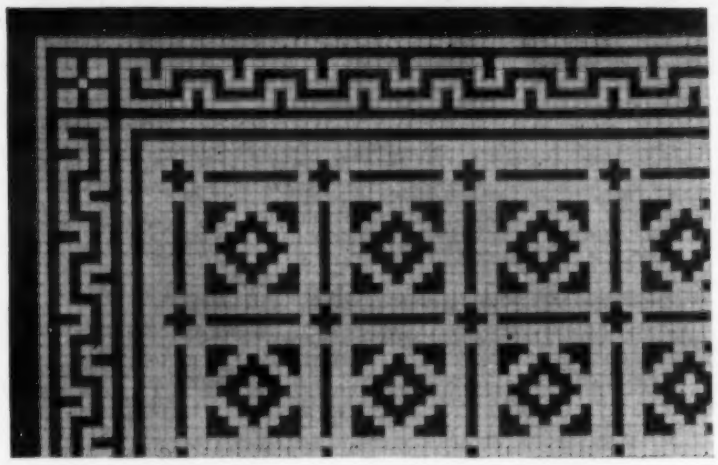
Our 23rd Year

Norton Floors



CERAMIC MOSAIC TILE
NOW MADE WITH NON-SLIP SURFACE

Alundum Tile is now being made in the ceramic mosaic sizes 3/4″ square and 1″ hex and in colors, brown, buff, gray, green, salmon, and white.

Alundum Ceramic Mosaic Tile may be used exclusively or in combination with vitreous or glazed tile, thereby attaining a non-slip ceramic mosaic floor.

Ideal for the edge of swimming pools, shower baths and washrooms, behind lunch and soda fountain counters, in restaurants and for store entrances.

Like the other Norton Floors Alundum Ceramic Mosaic Tile takes its name from Alundum abrasive. The use of this hard, tough abrasive so well known as the abrading element in Norton Grinding Wheels gives to the tile a surface that is durable and practically slip-proof.

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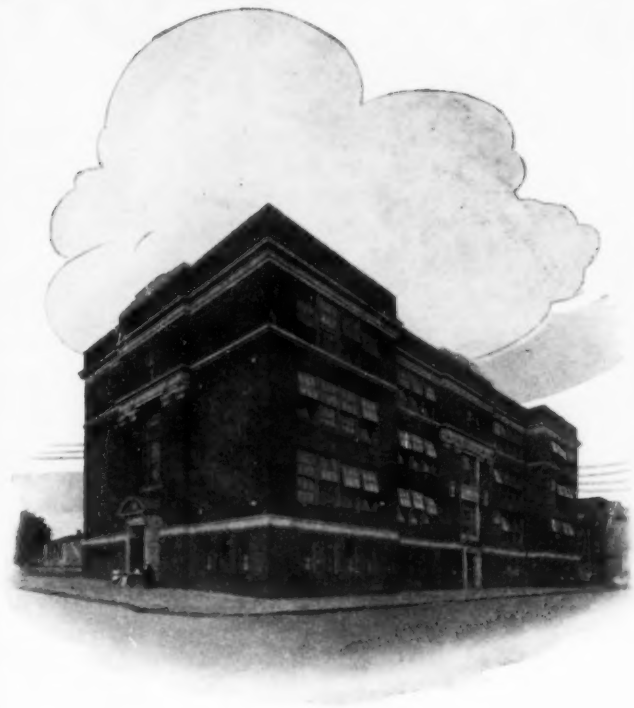
FLOORING



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Local Representatives In Principal Cities.

(Continued from Page 90)

schools were set back years in educational progress. The school board now makes much of the importance of these things which they abolished as an argument for a higher school tax rate. They were just as important then as now. No money was saved by their abolishment. Reactionary policies are extravagant."

—A survey made by the editor of the Atlanta, Georgia, Journal brings out the fact that the school officials of Louisville, Ky., Richmond, Va., Memphis, Tenn., Birmingham, Ala., New Orleans, La., Nashville, Tenn., Houston and Dallas, Texas, and other cities are in favor of divorcing the school boards from the city councils.

—"It is the mayor's constant interference with the work of the board that is the cause of all the trouble," said R. G. Harvey of the Racine, Wis., board of education.

"According to law the board is authorized to conduct all of the school business, which includes the hiring of teachers, the purchase of school sites, the erection of buildings and the choice of an architect. In the past no mayor of the city has interfered with this work. They have allowed the board to work out the problems and have kept the schools free from political quarrels and factionalism."

—Somerville, Mass. In accordance with increases of pay recently given to city employees, the salaries of administrative and clerical employees of the school board have been increased, the increases to date from January first.

—In a recent Trustee election at Royse City, Texas, Marvin Houser, J. C. Staggs, T. M. Miller, W. H. Jouette, A. G. Bailey, J. Cross and L. Sherrill were elected for the year 1924-25.

—New Bedford, Mass. In the interest of identifying school buildings, the board has passed a rule forbidding the renaming of schools in honor of individuals. It will be the policy of the board to name a school for the street or the district in which it is located.

—Chicago, Ill. Four new appointees to the board of education are to be elected shortly by Mayor Dever. Two local businessmen have been considered as possible successors to Hart Hanson and Dr. John D. Robertson. A lawyer and an architect will be selected to fill the places of Mr. Julius Smietanka and Mr. William K. Fellows.

—New York, N. Y. Dr. John A. Ferguson, chairman of the building committee of the board of education, has disclaimed all knowledge of the $4,000,000 expenditure entailed through the installation of the "Economy" grates in new schools. Dr. Ferguson declared the grates were intended for certain schools in which heavy coal had been used and were expected to effect a saving of between $300,000 and $400,000. Corruption or crookedness in connection with the transaction has been denied by Dr. Ferguson who charges that statements had been garbled. The grates had been recommended by Mr. William Gompert, the school architect, and were to be tested by the experts of the heating division as to serviceability and economy in operation.

—Chicago, Ill. Sixteen union employees of the school board have been dismissed by order of the business manager, making an annual saving of $34,000 in the construction and engineering departments. A further reduction of 32 employees is to be made effecting a reduction of nearly $77,000 in the annual payroll. It is possible that further eliminations will be made to overcome the lack of work for such a large force of employees.

—Mark L. Thomsen, former president of Cleveland, Ohio, board of education in a public address delivered at Lorain charged that the public was not getting out of the schools all that it paid for. He held that the teachers are not sufficiently trained, that the extension of the compulsory school age to sixteen years was a mistake, and that too much time was being wasted in summer vacations. He did not favor salary reductions.

—Permission to solicit one cent from every pupil in the schools towards a fund intended to buy the Monticello home of Thomas Jefferson was recommended by the Detroit, Michigan, board of education.

—The school board of Somerville, Mass., has adopted a recommendation of the committee on textbooks and course of study, providing that a psycho-educational clinic be conducted in one junior high school and in the elementary schools. The clinic is to be under the direction of the superintendent and is to be financed by the Commonwealth Foundation.

—The school board of Oak Park, Ill., has called for a referendum vote on three school extension projects which it presents to the citizens. The rapid increase in school enrollment and the lack of accommodations has prompted the calling of the election. It is the purpose of the board to carry out the proposed building program in the best interest of the entire district, providing the best educational opportunity possible to all the children.

SCHOOLHOUSE DEDICATIONS

—The new million dollar Theodore Roosevelt high school at Rockford, Ill., will be opened in June. Supt. Frank A. Jensen announces that William McAndrews, superintendent of the Chicago schools will deliver the dedicatory address.

—The new John M. Atherton girls' high school at Louisville was dedicated with President Edward Gottschalk of the board of education presiding. The program included an address by Supt. B. W. Hartley.

—The new $300,000 senior high school at Owensboro, Ky., was opened with an address by Arthur Y. Ford, president of the University of Louisville. J. R. Laswell is the president of the board of education, J. L. Foust is superintendent and J. L. Lewis principal of the new school.

—The opening of the new $60,000 high school at Harrodsburg, Ky., was characterized by an address by Mr. Henry Rhoades, state superintendent. The exercises were opened by Supt. A. K. McKemie. The building was designed by Nevins, Wischmeyer & Morgan, architects, Louisville.

—Here is the way a writer in the Minneapolis Journal views a chart on local taxation: "When city statisticians sit down to draw the picture of how the tax pot is divided up, they immediately slash out of the tax dollar a section about the size of a hired man's idea of a real piece of pie, and allot it to the public schools."

The Permanent School Fund in the State of Iowa

T. C. Holy, State University of Iowa.

Federal land grants furnish the basis for the permanent school funds in the different states of the Union. This policy of governmental aid to education in the form of lands and the income derived therefrom, was common in England during medieval times and was brought to America by the first New England settlers. The records of the General Court of the Massachusetts Colony show that as early as 1639, the income from Thompson's Island was set apart for the use of the school at Dorchester, while in 1641, the school at Boston was supported in part by Deere's Island. Connecticut, in 1733, set apart seven townships for the "perpetual use of schools," while in 1795, nearly one million dollars which was realized from the Western Reserve sale, was added to the permanent school fund of the state. In 1736, New York set aside "two lots in each township of the public lands for gospel and school purposes." Thus it is seen, that the idea of financing education, in part, through the sale of public lands, was made use of during the early colonial period.

The policy of federal aid for the support of education had its real beginning in the Land Ordinance of 1795 which applied to the Northwest Territory and was as follows: "There shall be reserved the Lot No. 16 of every township for the maintenance of public schools within the said township." A further provision of this Ordinance gave not more than two complete townships to be used perpetually for the support of a university. Following this policy, the United States gave to every state entering the Union previous to August 14, 1848, the sixteenth section of every township, the proceeds of which were to be used for the support of public education while every state admitted since that date, with certain exceptions which are given below, was to receive the sixteenth and thirty-sixth sections of each township for the same purposes. The original states received no grants since the federal government held no public lands within their borders, although attempts were made later to compensate for this difference by other subsidies. The exceptions to the second provision of this Act were as follows: Maine, Texas and West Virginia received no land for the same reason the original states received none, and Utah, Arizona and New Mexico each received four sections of each township. Iowa was admitted to the Union December 29, 1846, hence received only the sixteenth section of each township for school purposes.

Under the provisions of this Act, eighteen states received no federal grants, twelve received one section, fifteen, two sections, and three, four sections of each township.

In 1841, Congress passed the Five-Hundred-Thousand-Acre Grant Act whereby each state was given 500,000 acres of public land, the proceeds of which were to be used for highways, drainage and internal improvements, but Iowa, instead of using it for the purposes designated, added the entire amount to her permanent school fund. Four years later, in 1845, the Saline Grant Act was passed by Congress, which provided that certain lands surrounding salt springs, were given to the states for public school support. Land was received by Ohio, Iowa, Arkansas, and a few other states, although the grants were small in comparison with the earlier ones.

The Swamp Land Act was passed in 1850 "to enable Arkansas and other states to reclaim the swamp land within their limits." Much litigation and conflict resulted from the operation of this Act due to the expansion and recession of swamp lands during rainy and dry seasons, so the amount that any state received varied with the climatic conditions under which the survey was made. This, however, was Iowa's most prolific source of public lands for, under the provision of this Act, the state received nearly a million and a quarter acres.

Another very important land grant was the Morrell Act, which was signed by Lincoln, July 2, 1862. This Act gave 30,000 acres of public land for each senator and representative to which each of the states was entitled in the Federal Congress. The proceeds of this grant were to be used for the purpose of promoting "the liberal and practical education of the industrial classes in the several pursuits and professions in life." This grant is the foundation of the agricultural colleges. There was another minor grant made in 1845, known as the Five Section Grant but it amounted to only 3,200 acres and is of little import so far as federal subsidy in the way of land is concerned.

From these various Federal grants, Iowa received the following acreage of public lands:

Grant	Date of Act	Acres
Sixteenth Section	1848	1,014,331.05
500,000 Acre Grant.....	1841	500,000.00
University Grant	1840	46,080.00
Saline Grant	1845	46,202.53
Five Section Grant.....	1845	3,200.00
Swamp Land Grant.....	1850	1,192,044.32
Agricultural Colleges ...		204,309.30
Total Acreage Received..		3,006,167.30

In Iowa, the permanent school fund accumulated very rapidly at the beginning, amounting to nearly one million dollars within eight years after admission to the Union. This fund was invested at ten per cent interest, which income made possible the early establishment of schools in communities which otherwise would not have been able to support a public school. In addition to the proceeds obtained from the sale of these federal land grants, the State Constitution provides that fines, forfeitures and escheats shall go into the permanent school fund.

The first sale of school lands was made at $1.25 per acre; this price was raised, in 1858, to $2.50 but the stipulated price was removed in 1860 and the selling price left to appraisement. Under this later provision, some of the land sold as low as 25 cents per acre. This method of disposal was very unsatisfactory, so in 1870, the minimum price was fixed at $6 per acre, but unfortunately, there was little land left to be sold even at that price. At the above prices, one million dollars, the amount of the fund eight years after the admission into the Union, would require the sale of a very large part of the three million acres received through these grants.

To the credit, however, of the early Iowa legislators, it must be said that they missed no opportunity of increasing the provisions for the support of public education. They secured special permission from Congress to divert the entire 500,000-Acre-Grant to the permanent school fund instead of using it for the designated purposes. The Saline Land Grant was given over, at the outset, to the permanent school fund, but in 1851, the General Assembly passed a joint resolution to the effect that this grant be given over entirely to the State University Fund.

The Five-Per-Cent Fund, i. e., five per cent of the amount which the federal government received from the sale of public lands within the state, was to be used for the improvement of public roads and canals of the respective states. Our Constitution, however, provided that the funds derived from this, and other kindred sources, should be used for the benefit of the public schools, so Congress, in 1849, passed an Act authorizing the state to use it in that way.

From the sale of these public lands (all of which have long been sold), plus the amounts received from fines, forfeitures and escheats, a permanent school fund of $4,813,090 has accumulated, from which an income of $216,536 is received annually. The Constitution provides that this shall be distributed among the various districts on the basis of the total enumeration, i. e., those between the ages of 5 and 21, and amounts to less than forty cents per person of school age. This represents the annual income from more than three millions of acres of Iowa land, which if sold today at a very nominal price of $150 per acre would amount to $450,000,000. This invested at five per cent interest would produce an income of $22,500,000 annually. The total expenditures for capital outlay, interest payments, and current expenses in the elementary, high, normal schools and colleges of the system of public education now in operation in Iowa for the year 1921-22, plus the amount expended by the state department of public instruction, was $63,713,211.93. Thus if the land secured from the federal grants were sold at present prices, the income derived from this amount at five per cent interest would meet 35 per cent of the total cost of all public education instead of less than one per cent as it now is. Minnesota, which received about twice the acreage, has a fund eleven times as large, due largely to the fact that the land was not disposed of until a later time and, as a matter of fact, approximately two millions of acres are still held from which a large income is received.

In general, however, the fund has been well managed except for the low price at which most of the land was sold. A state law provides that losses in the fund shall be compensated for by the state, so considerable care has been exercised in the investments. Much credit is due the early legislators for their diverting all the federal grants into public school channels and they should not be criticized too harshly for the seeming shortsighted policy of the early disposal of these lands, for it may be that the early schools which the sale of these lands made possible, would compensate for the injustice to later generations. One is always inclined to think what might have been, so the writer yields to that inclination in regard to the permanent school fund, in thinking what it might have been, had the land been held to a later time.

MICHAEL DRISCOLL
Brookline, Mass.

Michael Driscoll, a member of the Brookline school committee for 50 years, observed his 80th birthday on April 14th. No formal celebration of the event was planned, but congratulations poured in upon him from his associates and friends.

One of Mr. Driscoll's prized possessions is a parchment bearing a testimonial from the Brookline School Committee, presented at the April meeting. The testimonial was in commemoration of Mr. Driscoll's 50 consecutive years of service on the committee and an acknowledgment and record of the committee's regard and affection for him.

At 80 Mr. Driscoll is still an active man and attends to his duties at Town Hall daily. The maintenance of Brookline's 75 miles of highways is under his direction.

Mr. Driscoll was born in Brookline, April 18, 1844. He engaged in mercantile business for a short time, later becoming associated with his father in contracting.

He was appointed superintendent of streets in Brookline, April 10, 1876. In March two years previous, he was elected to his first term on the school committee. He is the oldest member in point of age and service on the committee.

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embodies every safe element of playability which delights the heart of a child.

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It is a distinct addition to any beauty spot consecrated to the play needs of children.

It is cheap in but one respect: its ultimate cost.

Careful investigation, by those concerned with or active in child welfare and public recreation, is cordially invited.

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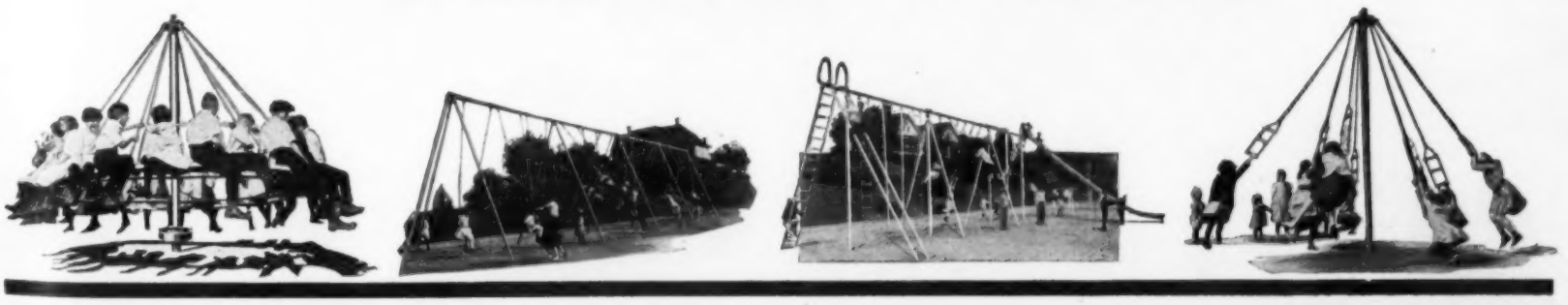

Are school boards one-sided?

Is enough attention devoted to the practical business side of school administration?

AS a Board Member you are a responsible director of a corporation engaged in a mighty complicated business.

You have the same problems of plant upkeep, repair and expansion as the manufacturer. You must decide practical questions that constantly arise concerning the administration of a business organization.

Even such details as the proper paint for school interiors, how to add years to the life of floors, and repairing a leaky roof—are part of your responsibility.

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Halls, auditorium and recitation rooms must be bright and cheery. CEMCOAT, the gloss enamel paint, intensifies light and adds a richness of tone and color. It stays white, is durable, washable and economical.

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Even a concrete floor, if left untreated, succumbs in time to the scuffing of countless feet.

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If your floors are of wood, a treatment with LIGNOPHOL will prevent the usual drying out, splintering, rotting or wearing away. LIGNOPHOL restores the natural oils and gums of the wood, keeping the floor resilient, non-absorbent, sanitary. LIGNOPHOL is not a surface oil; it is a preservative that penetrates the wood.

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SCHOOL ADMINISTRATION NOTES

THE MODERN SCHOOL ADMINISTRATOR AND HIS TRAINING

In his first message to Congress, President Coolidge devoted as much space to education as he gave to the combined subjects of tariff, shipping, insular possessions, and army and navy, or to the $12,000,000,000 debt due from foreign nations. The President feels that our material wealth, our institutions, or social development cannot be regarded as fully successful until their benefits reach every individual. To make these marvelously rich social goods available is the function of education. The discharge of this function demands teachers of superior native endowment, broad character, and expert technique.

In earlier times a broad collegiate or academic training was looked upon as sufficient preparation for the teacher's tasks, and culture is still preeminently important. But today we are unwilling to entrust our children to men and women, no matter how scholarly, unless we know them to be skilled in the art which they undertake to apply. In a word, a science of education is appearing, not yet so definite as that of medicine, yet highly organized and based upon incontrovertible facts, the issue of patient investigations.

In this comparatively new science there is especial need for wise leadership. New duties have been laid upon our schools. In no uncertain tone the people are demanding new types of efficiency to meet new obligations laid upon the coming generation. It is not enough that our educational leaders—superintendents of schools, principals, and supervisors—meet and fill the demands of ten years ago, or five years ago, or even three years ago. The physician of 1924 who would treat certain well known types of human affliction as he did twelve months since would be condemned for being behind the times, as trifling with human life. Like him the superintendent must keep in touch with every advance that science makes in his field of human service. Classroom procedure, methods for measuring the progress of pupils, playground activities, health programs, material equipment, construction of buildings, the financing of education, these and scores of other problems demand constant study and skilful supervision. It is not that the old is being swept away but rather that upon the foundations of the past better superstructures are being reared.

The same scientific method which the physician uses in medicine is now being applied to education in place of the old rule-of-thumb. While still incomplete, the results point to certain inferences of deep significance to school men and women. A few illustrations will suffice:

Through the development of standard tests, teachers no longer need to work in isolation; and if a teacher has mastered the technique of administering these tests, he may compare his own work with that done in hundreds of other schools. Doubtless there is a good deal of chicanery in testing as carried on in some places; but careful study will protect a teacher against this and teach him what and when to trust.

Extended studies of spelling vocabularies indicate that we have been prodigal of our children's time, teaching them to spell words that they never use, failing to teach words commonly used, teaching by cumbersome methods, teaching words in the wrong grades.

It seems clear that much of the work in reading has been directed to the production of elocutionary artists and public readers; significant changes must be made in order to teach children to gain quickly and accurately the meaning from the printed page.

Arithmetic has been thoroughly studied, and an informed teacher may know not only exactly the points at which a student will fail but also exact procedures for the correction of failure.

Expensive architects can plan poor school buildings; good supply houses can print poor record cards; experienced teachers cannot tell the difference between 80 per cent and 90 per cent; few teachers know how properly to classify or promote pupils; few superintendents know how to classify and promote teachers; textbooks are too often selected by accident or influence.

Today there are certain successful ways of carrying on a building program, of developing salary schedules, of building a budget, of reorganizing the curriculum, of developing student life, of character building, of handling athletics, of teaching safety, of writing reports, of scheduling classes, of purchasing equipment, of keeping books.—University of Iowa Bulletin.

ADMINISTRATION NOTES

—Chicago, Ill. Supt. Wm. McAndrew has announced a reorganization of the educational department into five divisions. Each of the divisions is to be in charge of an assistant superintendent, who is given supervision of certain districts into which the 300 schools are divided. In addition, they are given supervision of special activities and administrative matters.

With this division of work and supervision, it is expected that each assistant will gain a thorough knowledge of all the educational features of his department fitting him for promotion in the future.

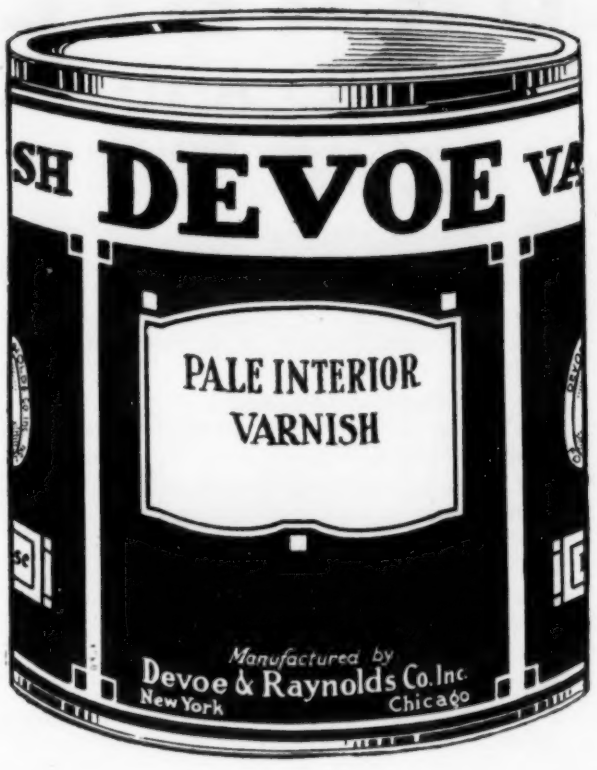
Under the new plan, Mr. William J. Bogan, recently elected, is given supervision of high schools and colleges, and also the supervision of two elementary school districts.

Under division B, Asst. Supt. C. E. DeButts will be in charge of the assignment and promotion of teachers. Asst. Supt. M. G. Nogge will supervise three elementary school districts, and Asst. Supt. Elizabeth Murphy will have charge of the division of arts. Statistics, finance, building and repair will come under the last division, of which Asst. Supt. Ambrose B. Wight is head. He will also supervise two elementary districts.

—Wilmington, Del. Beginning with April 28th, the public schools were opened and closed one hour earlier. School clocks remain on standard time.

—The school board of DePere, Wis., has discontinued the kindergarten department because of lack of accommodations.

(Continued on Page 98)



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The light strikes down through the varnish film as though it were polished glass, for the brilliance of this varnish is one of its dominating characteristics.

But Devoe Pale Interior Varnish is equally famous for its durability and elasticity. It neither checks nor cracks. It is easy flowing on the brush; hard-drying; and retains its youthful glow for years. It can be polished to a high glossy finish or rubbed to a dull satiny sheen.

The school board official or architect can experience a sense of safety and confidence in specifying Devoe Pale Interior Varnish, for it is a product of the house of Devoe, leaders in the paint and varnish industry since 1754.

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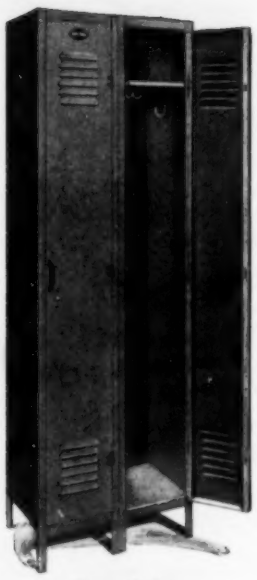

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Because: They are designed for hard service, are built of finest materials, and are finished with care.

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Sales Offices in All Principal Cities

(Continued from Page 96)

—State Supt. Thomas E. Johnson of Michigan has urged that school boards adopt the Detroit method of eliminating secret societies. Supt. Thomas points out that in Detroit the situation has been met by pressure upon parents so that the societies have been practically wiped out.

—Mr. William B. Ittner, of St. Louis, Mo., has recently completed a survey of the Danville, Va., school plant. The survey was made at the request of the board to provide a remedy for the present acute building problem.

—Middletown, O. Beginning with next year, school books for both the high and grade schools will be purchased through the board. The change is expected to produce a saving for the parents.

—Lincoln, R. I. The school board has ordered the superintendent to conduct intelligence tests in all the schools.

—New regulations prohibiting fraternities and sororities in public schools are contemplated by the New York Board of Education's law committee. In the meantime, letters are being sent to all parents requesting that they forbid their children to join these societies. The action is the result of the burning of three school girls with acid in a society initiation.

—East Orange, N. J. All school children are now rated on the basis of results attained in intelligence tests. Under the plan, children are placed in groups based on their ability to progress at nearly the same rate. The plan is in satisfactory operation and is believed to have advantages for both the pupil and the teacher.

—A stay-in-school drive was conducted in the schools of New York City from April 10th to 17th inclusive. It was the largest and most intensive effort yet made to discourage children from leaving school at an early age. An effort was made to impress parents with the importance of adequate training for their children. Speakers were also sent to the parents' associations and mothers' clubs, as well as to the schools. The work of the campaign committee covered 175 schools and reached 60,000 boys and girls.

—The school board at Carthage, Mo., has raised the tuition fees for non-resident pupils. The high school fee has been raised from $5 to $7 a month; that for the seventh and eighth grades from $3 to $5, and that for the lower grades from $2 to $5 per month.

—A survey of the school system at Knoxville, Tenn., has recently been completed by Dr. Lee Byrne to determine the housing needs of the schools. Mr. W. B. Ittner, St. Louis, is head of the committee of experts in charge of the survey.

—Under an amendment of the school law of Illinois, kindergartens may now be established as a legal part of the school system, in any school district where funds are available. Under the law, school boards are required to establish kindergartens on the petition of parents or guardians of children between the ages of 4 and 6 years. Such kindergartens must be maintained by the district as long as the average daily attendance does not fall below fifteen.

—The school board at Pawtucket, R. I., has discontinued school gardening activities. The action was due to the growth of commercial interests and the gradual absorption of land where children were accustomed to plant gardens.

—Tiffin, O. The school board has raised the high school tuition from $60 to $90 a year and the elementary from $30 to $45 a year.

Gloucester, Mass. In rescinding action taken in July, 1923, the board has made a change in the age for entering pupils. A child to enter the first grade must be five years on or before May first of the year in which the child enters school.

—Bristol, Va. The school board has adopted resolutions regulating the number of subjects a pupil may carry in summer school and the ratings to be given by teachers. The rules are as follows:

In the fifth grade and below, a pupil may attempt all of the subjects taken in a regular term. In junior and senior high schools, a pupil may attempt only three subjects, two of which may be new subjects, and in exceptional cases four subjects may be attempted where only two subjects are new. No pupil may be exempted from final examinations which are given under the direction of the superintendent.

In the rating of teachers, it is provided that teachers with a higher scholastic rating than called for by their certificates, shall be rated strictly in accordance with the certificate held, unless the teacher has attended a summer school of recognized standing for a period of twelve weeks and has received credits for a minimum of work. After 1924-25 teachers will be rated in accordance with the kind of certificate then in force.

—Shreveport, La. Urging the substitution of another form of punishment, the citizens' educational council has passed a resolution favoring the elimination of corporal punishment in the schools. No definite form of punishment was suggested to replace the rod.

—Newark, O. The board has raised the tuition rate of non-resident grade pupils to $6 and that of high school students to $8 per month.

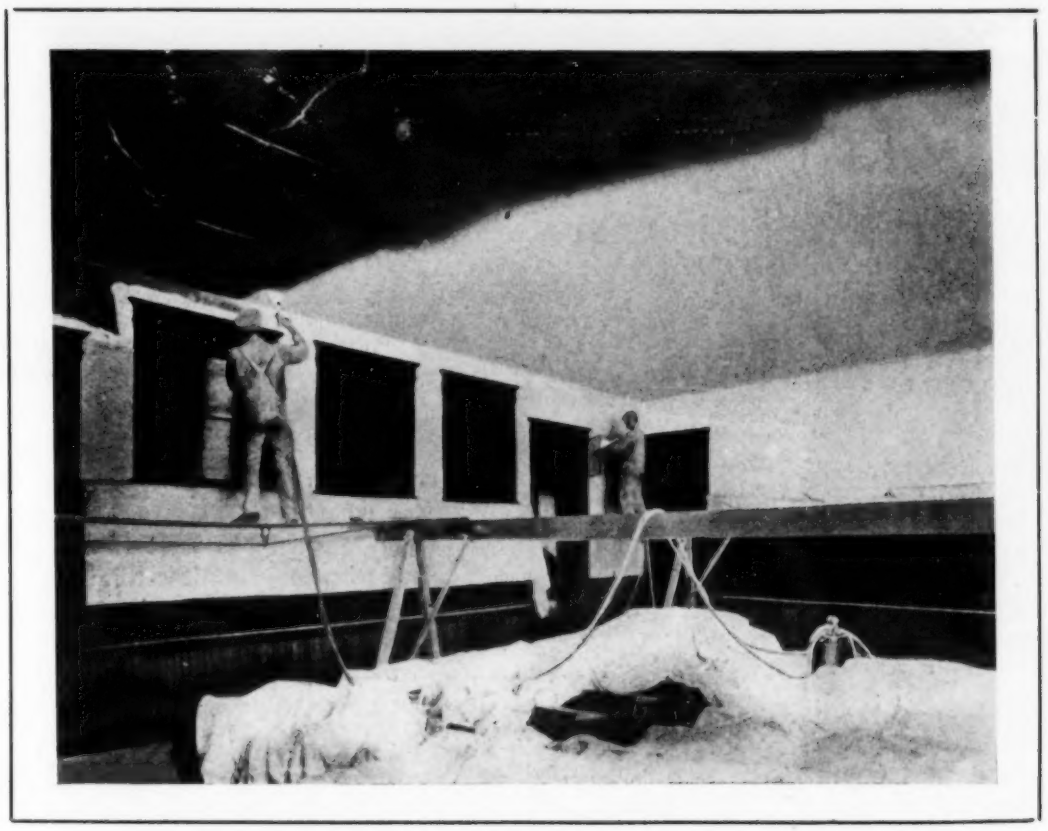
—The school board of Akron, O., has been asked to discontinue corporal punishment as a means of discipline. The whipping of a 10-year-old pupil which was followed by the suspension of the teacher, led to a movement to eliminate this form of punishment.

—Several cities in Wisconsin have united in a movement seeking support for a bill for increasing tuition charges in the high schools. The bill is to be presented at the next session of the state legislature. Figures have been presented showing that in most cases cities spend more money than they receive in tuition in giving high school training to non-residents. The present attempt at passing a law is the second effort, a former bill having failed to pass the legislature.

—Supt. G. W. Scott of Gorman, Tex., has introduced a new method of discipline for students which has proven quite satisfactory. The names of pupils with five demerit marks are announced once a week at the chapel exercises. Such students must report to the high school faculty which is a form of punishment to which they are especially averse.

—A resolution providing for the abolition of the supervisory system in the schools was recently introduced by the Bethlehem, Pa., board of education. After consulting public opinion it was decided to drop the matter.

How to Save Money on Better Summer Painting



YOUR vacation paint-up period this year can be shortened and made easier. And no matter what the extent of that painting is, there can be effected both an improvement in the quality of work done and an appreciable reduction in the cost of that work.

Spray-painting makes all of this possible.

The complete DeVilbiss Spray-painting System enables the painter to apply on any character of surface a more thorough, greater hiding, smoother and more even coating than can be hand brushed. Such a coating looks better, reflects more light and wears longer. This modern system of painting also eliminates drips and spatters and makes painting cleaner and easier.

Painting the DeVilbiss way the work is done four to five times faster than brush painting. That means up to an 80% saving in labor costs. There is further advantage here through the use of less scaffolding.

The DeVilbiss Spray-painting System is bringing these advantages and economies to others in the school field. It can bring them to you with its complete equipment for any kind and amount of painting—inside and out.

For further consideration of this important matter of painting better and at less cost, we shall promptly mail you additional operation and equipment details of the DeVilbiss System. Address—

THE DeVILBISS MFG. CO. 268 Phillips Ave. TOLEDO, OHIO

***New* DeVilbiss Spray Gun**

This latest DeVilbiss development provides for the most advantageous application of any paint or varnish material. It embraces 17 important, distinctive features, among which are a "Self-centering nozzle," a "Quick detachable spray head," "All parts interchangeable," "Simplicity of design," and "One model for all purposes."

This new Type "A" Spray Gun insures the utmost in spray gun value and service.

DeVilbiss
Spray-painting System

In the Café Savarin, Pershing Square, New York
They Have Solved YOUR Cooking Problems With Vulcans

No. 1751 Vulcan ranges in the Savarin kitchen installed by Duparquet, Monceuse & Co.

In many cases where an installation of Vulcan ranges, broilers, ovens or other types of coal or gas equipment, the Vulcans have paid for themselves in less than one year.

All you need is good food, cooked as quickly as possible at the lowest possible expense. That is what the Café Savarin management and chefs wanted. It is what they got when they had learned what Vulcan ranges and other Vulcan gas equipment will do. "Cutting Cooking Costs"—a free booklet and the list of Vulcan installations tell the whole story. To get them just send your name and address.

Wm. M. Crane Company *Gas Range Headquarters* **18-20 East 41st St. N.Y.C.**

MAKERS OF VULCAN ECONOMY HOT-TOP GAS RANGES

The Individual Versus Coefficients of Correlation

W. Hardin Hughes, Director, Research and Guidance, Pasadena City Schools.

"Coefficient of correlation" is on the tongue of almost every educational speaker nowadays. The expert in educational statistics uses the expression freely; the novice in educational tests and measurements speaks the term most glibly; and the ordinary teacher, not versed in the technical terms of his profession, sits back in awe and wonder when the speaker declares a correlation of "point so and so" between two series of educational measurements. "Oh, yes, there is a correlation of .78," and we fold our arms as though our problems were forever solved.

But however valuable coefficients of correlation may be in the measurement of general tendencies, they can only suggest problems in dealing with individual cases. In fact, correlations may tell us something very important about the group as a whole but give us no practical information about any of its individual members. The accompanying chart showing the relation of "general intelligence" levels to reading levels among 1,317 seventh and eighth grade pupils, is an excellent illustration of the point under discussion. The distribution of reading quotients for each mental level is indicated. If there were perfect agreement between the two levels, all numbers would fall in the heavy squares on a diagonal line from the lower left hand corner to the upper right hand corner of the correlation chart. As it is, 33 per cent of the 1,317 pupils included in the study, have intelligence quotients the same as their reading quotients; 44 per cent have reading quotients higher than their intelligence quotients, and 23 per cent of these pupils have reading quotients less than their intelligence quotients.

The wide distribution of reading abilities in each intelligence level is most significant. The fact that there is a "coefficient of correlation" of .81 (Ayres' short method) between intelligence levels and reading levels is only a small part of the story. It does not tell us, for example, that in the 100-109 intelligence level there are three students who have reading quotients of 140 or better; eleven who have reading quotients below 90; and that the range of reading ability in this particular intelligence level is as much as six years. The correlation of .81 does not tell us, furthermore, that in each of most of the other intelligence levels there is a range of reading abilities of approximately six years.

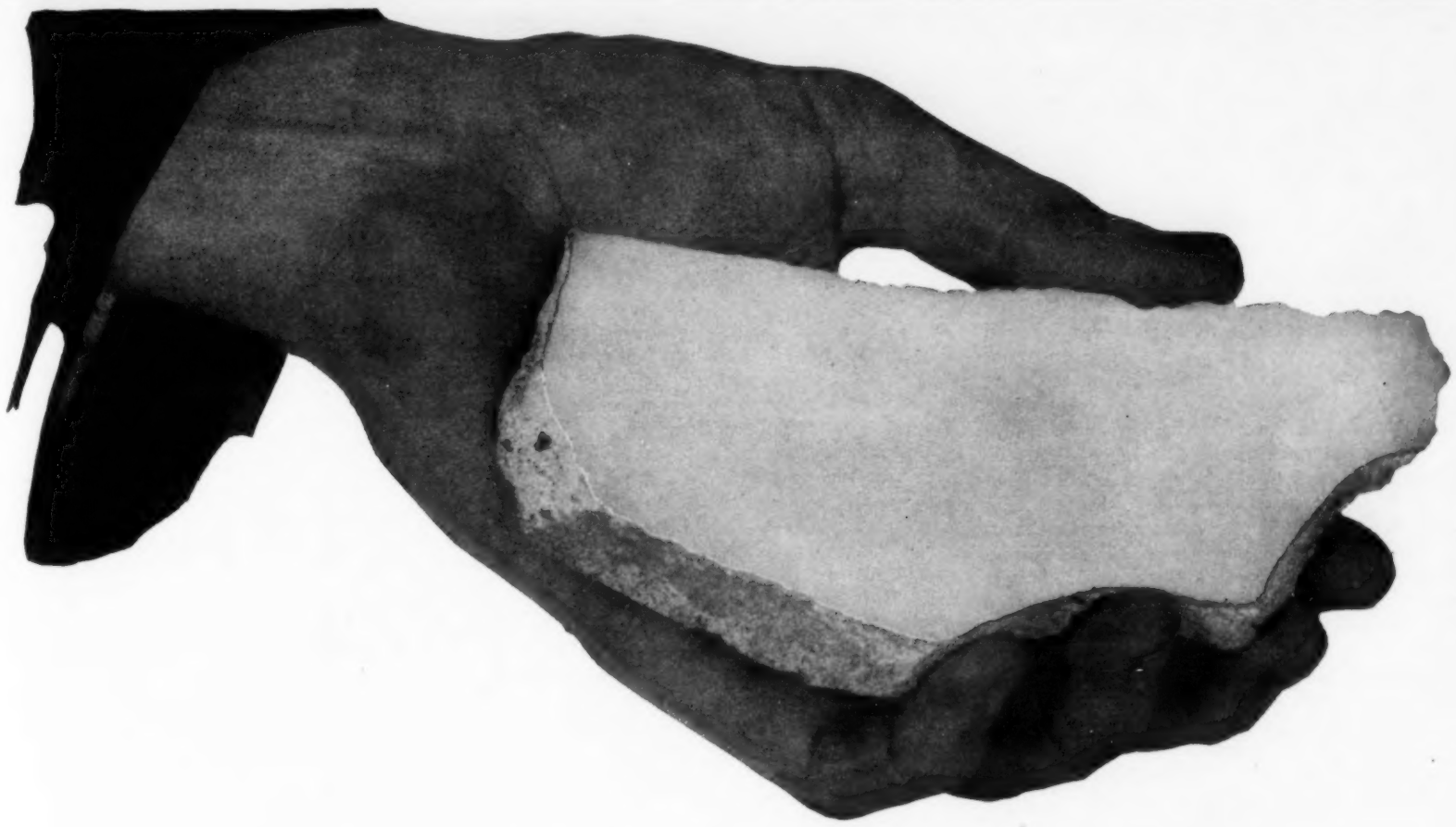
A consideration of this correlation chart clearly shows the necessity for further study of these pupils. More diagnosis is essential if we are to locate the specific causes of inefficient reading. We need to know, for example, just why four pupils of "very superior" intelligence, as indicated on the chart, are inferior to the "average" pupil in getting thought from the printed page. We need to know why a certain "near genius" is only a little better than "average" in reading efficiency. Every individual in short, whose efficiency is lower than his ability is a special case for further diagnosis.

(Continued on Page 107)

Intelligence Quotients

Reading Quotients	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150-159	TOTALS
160 & up								2			2	4
150-159								3	5	1		9
140-149					1	3	6	8	12	1		31
130-139						12	27	24	15			78
120-129					10	32	59	34	15	1		151
110-119			2	1	39	95	69	26	4	1		237
100-109			3	28	102	119	50	13	1			316
90-99			7	62	112	71	15	4				271
80-89			24	62	58	11						155
70-79		4	15	22	3		1					45
60-69		3	8	5	2							18
50-59	1	1										2
TALS	1	8	59	180	327	343	227	114	52	4	2	1317

CHART SHOWING RELATIONSHIP BETWEEN INTELLIGENCE QUOTIENTS AND READING QUOTIENTS.
The chart is to be read as follows: Beginning in the lower left hand corner, 1 pupil whose I. Q. is between 50 and 59 has a reading quotient between 50 and 59; etc. The tests used were Terman's Group Tests of Mental Ability and McCall's Reading Scale, Form 1.



"This Hunk of Plaster"

was rescued from oblivion recently during the remodeling of the Hubbell Building, Des Moines, Iowa. As a hunk of plaster it had no value — but as a PROOF of the lasting qualities of Hockaday Paint it was worth its weight in gold.

The walls, of which it originally was a part, have for over ten years been covered with Hockaday paint. These walls have been washed, scrubbed and cleaned enough times to "erase" any ordinary paint, still the smooth surface, the life was there. There wasn't a sign of lime-burn. And the paint looked good for many years more.

That's Hockaday Paint, folks, honest, dependable, covering more surface better, quantity for quality, and establishing the prestige for good judgment in paint of every one who specifies or uses it.

Write for our big illustrated "Paint Mileage" Book. Free to you if request is received on your letterhead.

Hockaday is a different paint. It comes in two parts—Body and Reducer.

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1823-1829 Carroll Avenue CHICAGO

HOCKADAY

THE WASHABLE PAINT FOR ALL INTERIORS

School Executives and Inoculation Tests

Hugh Grant Rowell, M.D., Teachers College.

Sooner or later (and I am confident it will be sooner in many cases), most school board members and superintendents will have to put themselves on record in regard to the new susceptibility tests. I don't propose to begin a technical discussion of immunity, but certain fundamental facts regarding these tests are a necessity to the formation of a sound opinion.

Certain unfortunate traditions are fostered by a few regarding vaccination. The impartial observer, after hearing both sides of the case, is willing to admit that the present compulsory vaccination laws are right in principle and serve to protect the pupil, the school, and the community from the terrible disasters which would arise from a smallpox epidemic. The only point which has to be met by the school in this situation is whether the laws will be carried out in spirit or with great laxity. School systems usually decide upon a policy which is fair to all concerned, and their executives find that the majority of the community will support them in such an attitude. As in all other matters, you can't please everybody.

The new susceptibility tests offer a somewhat different situation. Taking them in an entirely voluntary matter, the decision of the school must be largely whether the pupils shall be offered the opportunity of having the tests, and the protective inoculations, where the tests show a pupil is susceptible to the disease.

At present the "Schick test" for susceptibility to diphtheria is the commonest and best known test. The protective inoculations are three, given one week apart to susceptible children or adults. Six months later a second Schick test is given to make sure whether complete protection has been afforded. How long does the protection last? I can quote Zingher of New York (who has had an exceedingly broad experience in this work) to the effect that it lasts at least eleven years. How much longer we do not know as yet. It may be for life, and it may not.

The test itself consists simply in putting a drop of testing material under the skin of one forearm and a drop of control material under the skin of the other forearm. In from four days to a week, we look at the arms and determine whether one or both arms show red spots at the point of inoculation. A red spot on the arm with the testing material, or a strong red spot on this arm and one not as red on the other arm mean that the person is susceptible to diphtheria and should have the protective inoculations. No redness, or redness of exactly the same sort on both arms, means that the person is naturally protected against diphtheria and does not need the inoculations. The discomfort is about as bad as being pricked with a pin.

The inoculations cause a certain amount of redness in the region of the point of inoculation. As in typhoid inoculations, the person may feel somewhat out of sorts for about a day. That's about all there is to it.

The material injected has to be approved by federal bureaus as well as state bureaus before use, and may be considered safe. Great care is used in its preparation. Studies are constantly being made to lessen any discomfort after the inoculations have been given.

Granted there may be a little minor discomfort, anyone should be willing to admit that there is a tremendous difference between the comparatively slight discomfort from the inoculations and the mighty big discomfort from even a mild case of diphtheria—and this is considering only the personal element.

So much for the tests. Now, who are the most susceptible to the disease? The child at three is usually at the most susceptible stage, but if susceptible at all (unless protection is later attained by contact or artificial means), protection will probably never be complete, although in general the degree of protection is greater as the person grows older. From this we can see that it would be ideal to attend to this matter in the pre-school age. Practically, it is difficult to do, and for the present at least school age is a feasible time to carry out the test and protective measures.

What children are least safe? Children of the socalled better classes—the higher the social scale, the less natural protection. This is probably because the child of the streets receives constant small exposures to the disease and builds up a contact immunity in this manner. But even then by no means all children of this poorer group are safe—it is only true that they are safer than the other group.

Anyone who has the least understanding of school medicine knows that one may at any time find a case of contagious disease in any classroom, with resulting exposure of the whole group.

Does it mean anything to know (1) what children in the group are not going to take the disease? (2) What children are likely to take the disease? The Schick test alone tells you this. By the inoculations the former group is simply increased.

Cannot every schoolman see how this knowledge might be used to advantage in improving the attendance record without danger?

Recently the Dicks of Chicago have brought out a similar test and inoculations for scarlet fever. The advantages, in fact almost everything about the "Dick Test" and the Schick test is similar except that the Dick test may be *read* in 24 hours and inoculations begun at once.

The writer has had the Dick test, and was shown to be very susceptible to the disease. As a result he has now had three inoculations. That no very serious effect has resulted is shown by the fact that he is able to write and type this article.

Zingher is doing some splendid work with this test and educators and school board members should keep in touch with his work and that of the Dicks. They will find some physician doing this test in most of the medical centers at present, and in the writer's opinion, it is only a question of a very short time till the test and protection will be available for all who desire it. Susceptibility figures and conditions are apparently about the same as those for diphtheria.

At present, then, the school administrator may have to put himself on record in regard to Schick tests. Later he can keep in mind that the Dick test for scarlet fever will be available.

Now, if these tests are so good, and the community knows about them, as they surely will, sooner or later school authorities will be asked why they are not given in local schools. The next thing, then, is, How shall local school children be given an opportunity for the protection?

The auspices are unimportant. If the board of health is willing to do the work, let them do it and cooperate with them. If the school physicians know how to do it, let them guide the school board. If they haven't the training as yet, see that they have an opportunity to go somewhere to see the tests and to learn the technic—it is easily learned. There is some doctor in practically every community and probably more than one who can give whatever facts are needed and can tell the school board all the members want to know on the subject.

Regarding the public. The public fears anything which it does not understand. So the first thing to do is to get some articles into the newspapers and elsewhere, telling all facts about the test and its purpose and its advantages. Then give the public a chance to think things over and see if they would like an opportunity to have their children protected.

I have found that a moving picture of the test, preferably taken locally if there is a weekly local news film, will show the parents and the public in general exactly what is being done. When they see how little it bothers the child, they are satisfied that it would be very valuable for their children. In other words, all that need be done is to show the people that the school authorities are playing fair with the public and let them decide what they want.

I don't believe that children should be begged to take these tests; in fact, school men are foolish if they do so. The opportunity of having the test means enough to the child. Some will neglect the first opportunity and ask for a chance later. Some will never take the test. The school authorities do their duty if they have made the opportunity available and made it known thoroughly.

Do not try to save on printing during the tests. At the beginning of the work, each child should be given a circular to take home—this to contain a simple, clear explanation of the test and its purpose, and a permission blank to be filled out (the blank may be torn off the bottom of the sheet) by the parent and sent back to the school if the test is desired.

When the test is given the child should be given another slip to take home, telling just what will be seen on the arm, so that needless worry may not result.

If the inoculations are given (as in the case of the test), signed permission is needed. After an inoculation the child should be given a paper, telling exactly what may be expected as a reaction, and preferably containing a telephone number which the parent can call in case of worry. In this way, the school authorities avoid any apprehensions and give the parent the feeling that the school is standing behind the test and them.

Unless circulars are distributed with care someone may start a "wild yarn" about terrible things. These, when checked up, usually amount to the fact that the child may have felt a little out of sorts for a few hours and a red spot on the arms, both of which the parent would have expected and promptly forgotten had she been told by the circular that this was to be expected. Investigate every "wild yarn" preferably in consultation with some official of the board of health. They will be of the variety of troubles which the well-known old lady had who "had many, many troubles all my life but most of them never happened."

It is well to have one member of the school staff and at least one school committeeman go to some city where the tests are being done, to see the work and get all the information they can (better take the school physician along, too). The state and local boards of health will gladly cooperate with you. The expense is comparatively small and the results are big. It sounds like a dream but with the aid of the Schick test and the inoculations, it is possible to stamp out diphtheria. The only condition is if the work is universal enough.

School boards and school executives are rightly conservative. They want to offer only sound plans in their school systems and they want to be sure they are worth while. That is precisely why I suggest that this whole matter be given thorough study. The more it is

(Continued on Page 107)

Sani-Onyx and Sani-Metal Have Solved the Cafeteria Problem

Look For The "Raised Rim" Top

THE problem of selecting cafeteria equipment for your school is just as important as the selection of seats, plumbing or any other permanent equipment. Old fashioned wooden equipment, which requires constant refinishing, is being rapidly replaced by a conbination of ***Sani-Onyx*** with ***Sani-Metal.*** Hundreds of installations of this type have been made in schools all over the country — many more will be installed this year. Those responsible for school equipment realize that it is economy to purchase durable, permanent equipment – the kind that will look just as well ten years later as the day it was installed.

Sani-Onyx cafeteria counters and table tops are as hard and smooth as polished glass. This ***snow-white*** surface is always clean and inviting and can be kept in that condition by simply wiping with a damp cloth. This type of table top has a "raised rim", (an exclusive patented feature) which prevents spilled liquids from dripping on the floor or clothing. ***Sani - Metal*** Porcelain Enamel table bases will last a lifetime in any climate. This durable material resists the deteriorating effects of wet brooms and mops. ***Sani - Metal*** bases can be secured in white, brown, mahogany and grey color.

Write to the nearest fixture supply house or this office for catalog and full information on the ***Sani*** line of food and drink equipment. Send a diagram of your floor space and we will make a blue print lay-out of a complete installation free of charge.

Sani Products Co.

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Selling Organization for Marietta Manufacturing Co. and Chicago Hardware Foundry Co.

Another User Prefers the LANDIS Electric Time *and* Program Clock System

Handley School, Winchester, Va. W. R. MacCornack, Arch., Cleveland, O.

In the Handley School there is embodied one of the finest examples of modern school building practice in America.

With its highly diversified curriculum, their requirements in the way of Electric Time and Program apparatus are, naturally, of the most exacting order.

After a careful investigation, Landis equipment was adopted because of its simplicity, quality, dependability, extreme capability, and because of the service back of it.

Let us show you the advantages of our equipment and our service. We would be glad to send catalog and estimate without obligation. Write our nearest office.

LANDIS ENGINEERING & MFG. CO.

423 Board of Trade Bldg., Indianapolis, Ind. **Waynesboro, Pa.**

THE SELECTION OF THE SCHOOL BOARD SUPERINTENDENT.

(Concluded from Page 36)

selecting a man advised a friend of his who desired the position not to appear until the day of the election. A few hours before the board meeting the new applicant appeared. He was a good salesman, and was elected. A few days later, two of the board members learned that the newly elected superintendent was a man of immoral character. But as he had been duly elected, they decided not to divulge this bit of information. Within two years he was dismissed on charges of immorality. If the board had postponed the election until it had investigated it would have saved the schools and the city from humiliation.

Boards of education should be on their guard against the "booster." He is the man who will sweep some board members off their feet. It is well to verify the statements made by the men who are being considered. The honest schoolman welcomes having his record looked into.

General letters of recommendation should not be given any consideration. All such are good. Instead of relying on letters of recommendation, the board itself should look up the applicant's record. Fortunately the practice of looking over general recommendations has about ceased, but some boards, especially those in the smaller cities, do not as yet take the time to inquire into the qualifications of the men that they are considering. Often they will depend upon the recommendation of one or two men who may know but little about the ability of the man that they are recommending. If a board receives a flood of letters urging the election of a certain man, it should not proceed to elect him at once, but it should take time to look up his record in the places where he has served as superintendent.

Many mistakes have been made by boards of education when electing a new school superintendent, but fewer mistakes will be made in the future if they will proceed to search for a superintendent of schools in as systematic way as does the board of directors of a private corporation when looking for a new executive.

COMPARISON OF INCOMES, ILLITERACY, LENGTH OF SCHOOL SESSION, AND YEARS OF SCHOOL LIFE BY STATES.

(Concluded from Page 39)

age; (3) average number of days schools were kept open; (4) per cent that high school attendance was of total attendance; (5) per cent that boys were of girls in high schools; (6) average annual expenditure per child attending; (7) average annual expenditure per child of school age; (8) average annual expenditure per teacher employed; (9) expenditure per pupil for purposes other than teachers' salaries; (10) expenditure per teacher for salaries.

Columns 13, 14, 15, 16 and 17 give the rank in illiteracy in 1920, educational ranking according to the Ayres system in 1918, rank in per capita income in 1919, rank in average income per wage earner in 1921, and rank in years of school life in 1920 respectively.

With these five rankings before us it seems quite the general rule to find a State ranked rather uniformly throughout these various items. That is, if a State ranks low in one item, it almost invariably ranks low in all the other items. If it ranks high in one item it generally ranks high in most of the other items.

There seems to be a rather high correlation in the ranking of States according to income, according to educational advantages, according to illiteracy, and according to the average length of time the individual goes to school in these various States. The Pearson coefficient of correlation is used here to express this relationship mathematically, and it should be kept in mind that 1.000 represents perfect correlation. The correlation coefficients between these various items ranked by States are as follows and in the order named:

Per capita income—Per wage earner income	.8715
Ayres index—Per capita income	.7003
Per wage earner income—Average school life	.6720
Illiteracy—Average school life	.6687
Ayres Index—Average school life	.6629
Per capita income—Average school life.	.6504
Ayres Index—Per wage earner income.	.6400
Illiteracy—Ayres Index	.6045
Illiteracy—Per capita income	.4808
Illiteracy—Per wage earner income	.3647

There is no attempt in this article to prove that illiteracy is either a cause or a result of size of income, nor that earning power is particularly affected by length of school life. The primary object is to present relationship that seems to exist between the various items included in the accompanying table and to express mathematically something of the closeness of this relationship.

WHAT WE MAY LEARN FROM MASSACHUSETTS IN PUBLIC SCHOOL FINANCE.

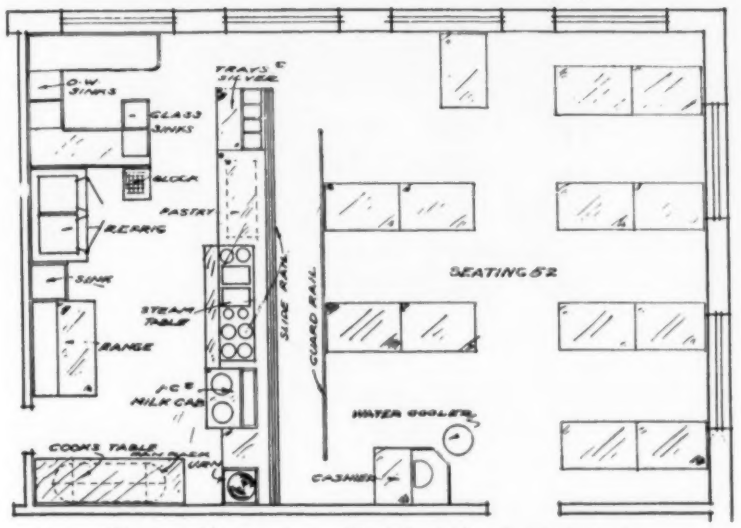
(Continued from Page 41)

cent of the pupils live in Groups 4, 5, and 6, where valuations range from $6,000 to $9,000 per pupil. The counties in Group 1 are approximately twice as able to produce school revenue as the counties in Groups 5 and 6.

It is evident from these comparisons and from others which might be made that however much Massachusetts might improve her educational situation by establishing the county as a unit of school support, neither the county nor any other local unit which might be devised will ever be capable of equalizing school reve-

(Concluded on Page 107)

Install a Cafeteria in Your School This Summer!



Floor Plan of a Model School Cafeteria

The above floor plan illustrates a model arrangement of a school cafeteria designed by our engineers for use in a small or medium sized school. It has a seating capacity of 52 and its equipment is capable of handling 175 per hour. All of the equipment here shown is simple and compact, yet sturdily built and capable of giving the best of service for a long period of time. This is but one of several model cafeterias we have designed ranging from the small to very largest of requirements.

THE summer vacation period will soon be here and your school buildings will be closed for at least three months. There is no more opportune time to install a cafeteria in your school, and *now* is the time to make this decision so that it will be ready for operation when school opens in the fall. The value and necessity of the school cafeteria has been proven beyond doubt, and school boards everywhere are enthusiastic over the increased efficiency and general improvement that the cafeteria has effected in their schools. Our Engineers will gladly co-operate with you in going over the conditions in your school and determine the exact size and type of installation best suited to your needs. This will not obligate you in any way, and you will have the facts first hand as to the advantages a cafeteria will offer for your particular school. *Act today!*

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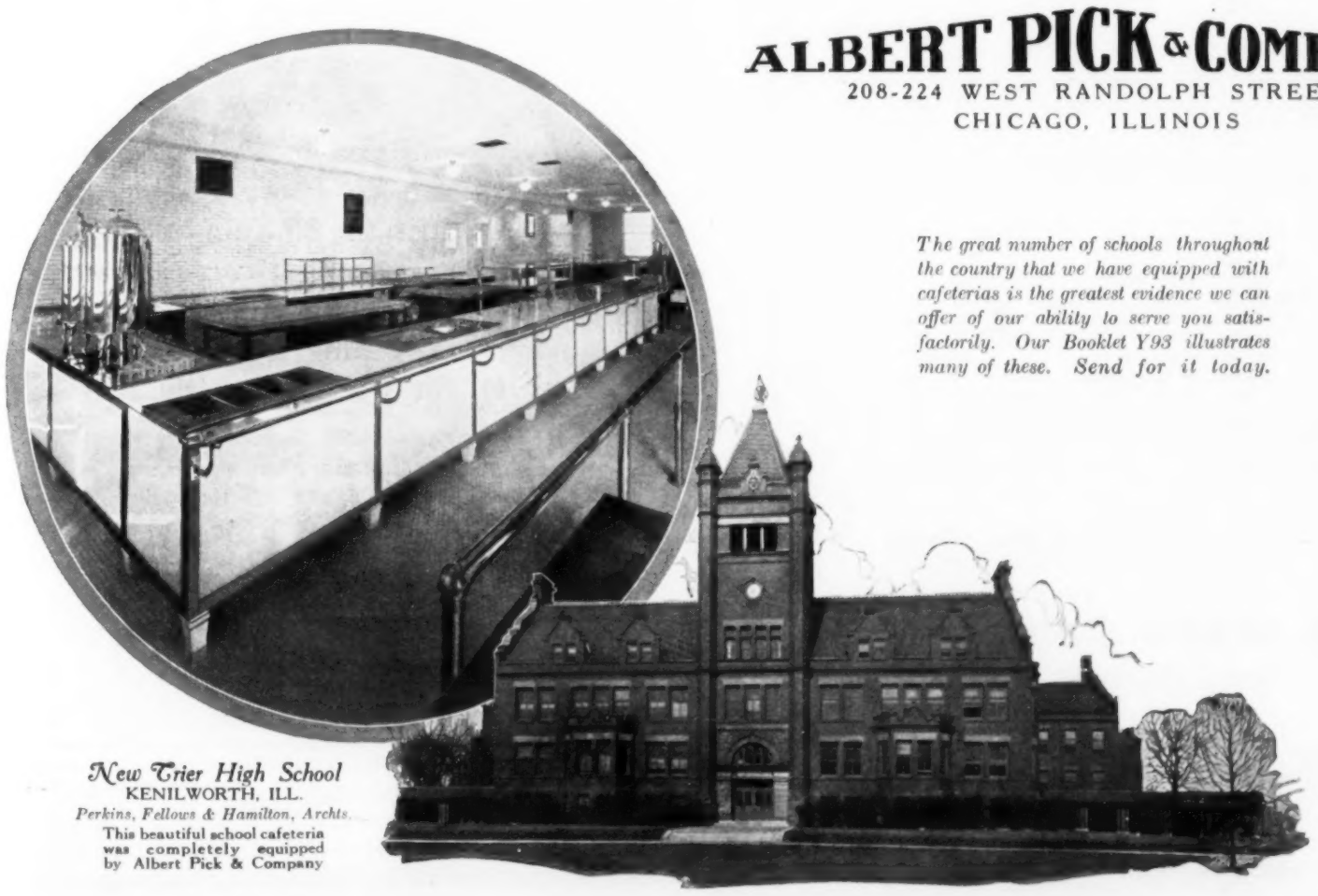
The great number of schools throughout the country that we have equipped with cafeterias is the greatest evidence we can offer of our ability to serve you satisfactorily. Our Booklet Y93 illustrates many of these. Send for it today.



New Trier High School
KENILWORTH, ILL.
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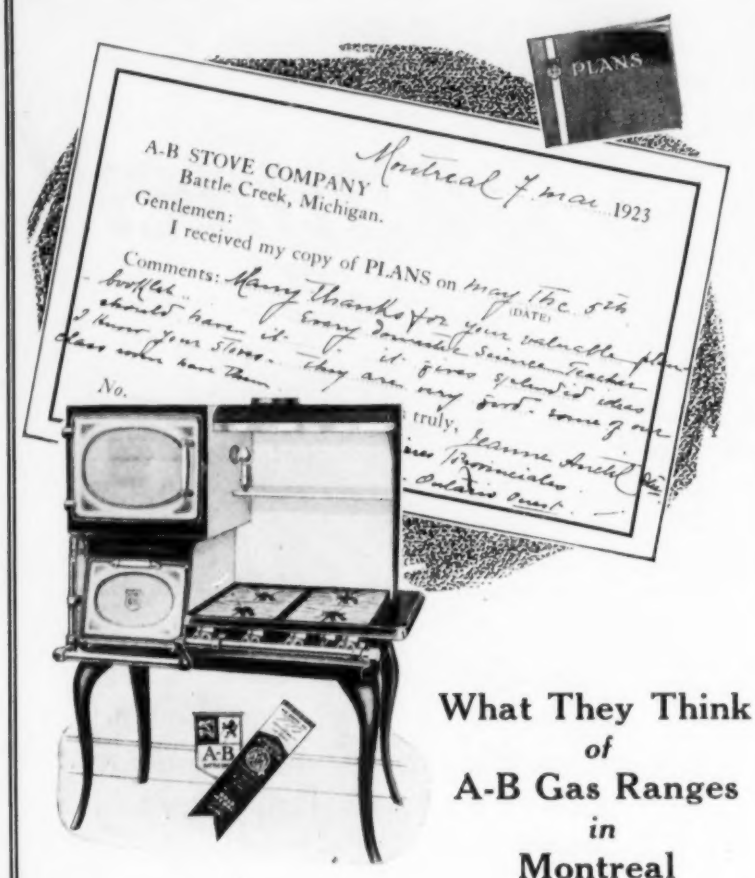
This beautiful school cafeteria was completely equipped by Albert Pick & Company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Gentlemen:
I received my copy of PLANS on may the 5th
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Comments: Many thanks for your valuable plan booklet. Every Domestic Science Teacher should have it. It gives splendid ideas. I know your stoves—they are very good. Some of our classrooms have them.
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What They Think *of* A-B Gas Ranges *in* Montreal Schools

"Many thanks for your valuable plan booklet. Every Domestic Science Teacher should have it. It gives splendid ideas. I know your stoves—they are very good. Some of our classrooms have them."

That is the message contained in the card reproduced above and received from the Provincial School Manager's Office at Montreal, Canada. It is only another evidence of the splendid features which have made the A-B Gas Ranges so popular for classroom instruction in many of the biggest and best schools of the country.

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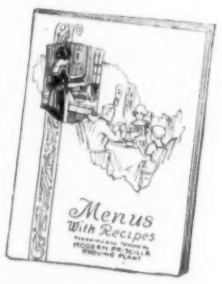
Advantages which specially commend the A-B Gas Range for classroom work, and which should be considered for any proposed school installation are: compact, durable construction; guaranteed rust-proof ovens; glass oven doors; patented heat centering burners; smooth, easy-to-clean surfaces, and the famous A-B Oven Heat Control.

Priscilla Menu Books Free



Experts of the Housekeeping Department of the Modern Priscilla Proving Plant, in their test of the A-B Gas Ranges, prepared special menus for twenty-one complete meals. These menus together with full recipes, have been gathered into a book which we offer with our compliments to any one interested. How many copies can you use?

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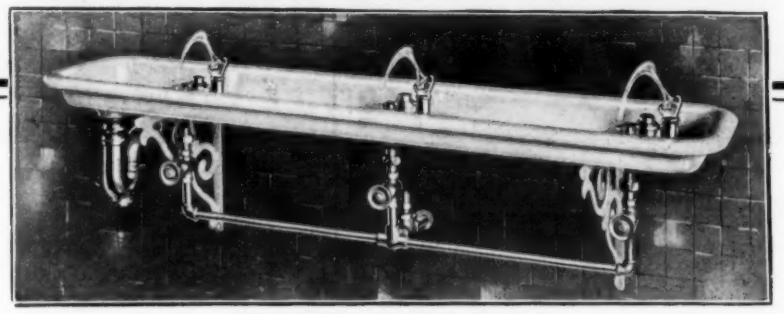

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"How Are They Different?"

We Welcome discussion of school drinking fountain problems. We have a type to meet your needs, whether based on price, sanitation or appearance.

IN our literature, in personal talks with school authorities and architects, we claim Halsey Taylor Drinking Fountains to be radically different and also the most practical for school specifications. "But," we are asked, "How are they different?"

Schools, more than most projects, demand extreme care in the selection of materials that guarantee utmost sanitation and health protection. On this basis alone, Halsey Taylor Drinking Fountains are far superior, because of their patented features, such as—

1—AUTOMATIC STREAM CONTROL—The pressure may vary, but the stream never does. A patented automatic control keeps height of stream always uniform, regardless of pressure variation.

2—FRACTICAL SIDE-STREAM—All authorities agree that a slanting side-stream is the only sanitary drinking stream! The two-stream projector insures sanitary side-stream, as no lips need ever touch the source of water supply.

3—NON-SQUIRTING FEATURE—The guarded water outlet makes squirting of water and messing of halls impossible. Children cannot willfully squirt the water, even if both water outlets are closed.

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HALSEY TAYLOR Puritan DRINKING FOUNTAIN WARREN OHIO-U.S.A. *Side Stream Automatically Controlled - Non Squirting - 2-Stream Projector*

(Concluded from Page 104)

nues, school burdens, and educational opportunities. The state and the state alone can do this. What proportion of the total school revenue ought the state to provide and what proportion ought to be furnished by local units? In view of the discussion of this topic which the writer has presented elsewhere, it is unnecessary to enter upon a consideration of it here.[1]

Conclusion

It has been shown again and again throughout the present account that Massachusetts has much to be proud of in her present system of school support; not only as to her actual achievement, but also as to the intelligent and scientific manner in which she has modified her practices from time to time. That there are, however, many respects in which this system may and ought to be improved, goes without saying.

[1]See F. H. Swift "State Policies in Public School Finance," Bureau of Education bulletin, 1922, No. 6. See also "Studies in Public School Finance. The West —California and Colorado," pp. 145-6.

EDUCATIONAL SUPERVISION.

(Concluded from Page 49)

The supervisor's attitude. Much depends, however, on the supervisor's attitude toward his task and his co-workers. One who has not the "disposition to help, to encourage, to cheer * * * right in combination with the resolve to see faults corrected and wrong procedure righted," (1); who does not know how to be broad-minded and lenient without being lax, will have little success in the supervision of instruction, no matter how broad his knowledge and experience. On the other hand, one who possesses or cultivates such attitudes toward his task and his co-workers may do much good in spite of a lack of breadth of knowledge and experience.

(To be continued)

A FEW EXAMPLES OF SCHOOL BUILDINGS IN THE MIDDLE WEST.

(Concluded from Page 61)

in the early morning and in extremely cold weather, the cost of operation will not greatly exceed that of a non-ventilated system.

"Simplicity of all heating and ventilating plants and sanitary fixtures, all as nearly "fool proof" as possible, will largely cut the costs of maintenance. The elimination of all frills in interior design and detail, the avoidance of all finish trim that it is possible to avoid, plaster jambs at all windows, the elimination of well openings at stairways, will all reduce the work of the janitor and improve the sanitary features."

THE INDIVIDUAL VERSUS COEFFICIENTS OF CORRELATION.

(Continued from Page 100)

Incidentally, an examination of the correlation chart shows the inadequacy of any plan to classify in reading on the basis of "mental age" alone. After all, a true classification depends on individual achievement in the subject under consideration and this achievement may or may not agree with "mental age." Mental ages and intelligence quotients, however, are of value in determining, in large measure, what levels of achievement to expect of pupils.

The purpose of this article is not to discredit intelligence quotients and coefficients of correlation, but to indicate that the measurements people must get much farther than this point if they are to sell their ideas to teachers and laymen.

SCHOOL EXECUTIVES AND INOCULATION TESTS.

(Continued from Page 102)

studied, the sounder and more desirable it seems. As far as my own schools go, I not only talk about it, I offer the Schick and Dick tests and the inoculations. Furthermore, I take them myself. If I didn't offer these tests, my school parents would think I wasn't up to date.

THE SCHOOL TAXATION QUESTION IN OHIO

—E. V. Bowers, superintendent of the Galion, Ohio schools has instituted a study of the tax situation of the state with a view of improving the school finance situation. He fixed the value for all personal property in the state at $4,099,873,615. The deposits in the banks and loan associations aggregate the sum of $2,462.000,000.

He reports that this vast amount of personal property escapes taxation, and adds: "It has been suggested that, in order to bring out this money for taxation that either the county auditor be given authority by law to go into the banks and obtain the amounts on deposit, or that the banks themselves be taxed on their deposits and they in turn collect from the depositors. On the other hand the banks claim that either of these plans would cause money to be withdrawn to such an extent as to seriously handicap the banks and ruin business in general. Banks are advocating strongly the classification of property. While I am not, at this time, advocating the classification of property or of tax rates, it is a fact that cannot be denied that if the amount of money now 'hidden' could be taxed only a few mills on the dollar, it would produce a large amount of money and would somewhat relieve the present high tax situation."

Mr. Bowers reports that the realty property of the state is assessed at an average of 66 per cent of its true value. The average of taxation in Ohio is 21.32 mills.

The schools received 45.42 per cent of the total tax raised in Ohio in 1923. This represents an increase of seventeen per cent, over five years ago. This increase is about the average for cities, counties and townships as a whole.

—North Plainfield, N. J. The citizens have recently refused to sanction an additional appropriation of $75,000 for the new high school. It is probable that the plans for the building will be revised to make the cost come within the original appropriation of $300,000.

ALL THAT SCHOOLS MAY DEMAND IN

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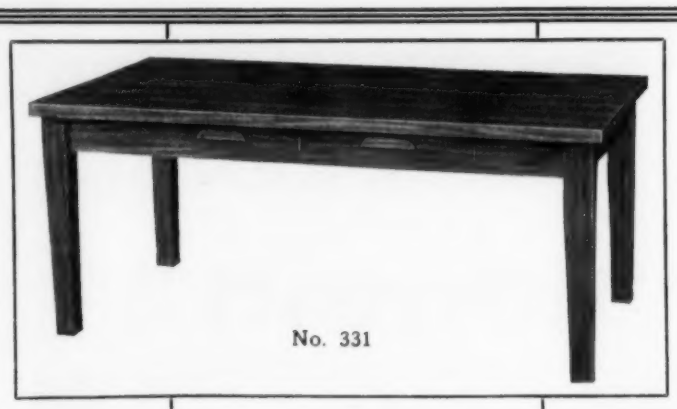

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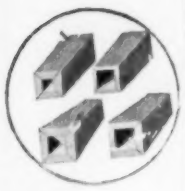

FEATURES

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MUTSCHLER BROTHERS COMPANY NAPPANEE INDIANA

HIGH SCHOOL ADMINISTRATION

—The matter of social and other non-scholastic activities in the city high schools of Lancaster, Pa., has been a matter of special concern to the school board and supervisory officials. In an endeavor to make clear the attitude of the board on these affairs, and to define the responsibility of the board and of the principals and faculties of high schools a definite policy has been adopted to govern in such matters.

Experience has proven that not more than three social functions are necessary. These the school officials are willing to be held responsible for provided they are held at times and places and under regulations approved by the high school principals.

The three functions thus sanctioned are a class social in the second semester of the junior high school; a dance in the first semester of the senior high school; and a reception in the second semester of the senior high school for each annual and mid-year class.

These functions may be attended only by the members of the class giving the function, the members of other classes still in school on invitation of a member of the class giving the function, parents of members, members of the board of education and the faculties of the high schools, with their husbands or wives.

These functions may be held only at such times and places and under such regulations as may be approved by the principals and by the superintendent of the school system.

All other social functions whether given in the name of the class or the school, are unauthorized by the school authorities, and parents of children attending these functions are expected to assume the entire responsibility for their conduct on such occasions.

In addition to the above, there are two public programs given jointly by the pupils of the two high schools. These are the annual glee club concert, given in the first half of the school year, and the senior class play given in the second half.

Special activities such as societies, clubs and the like are under the supervision of some member of the faculty and are not social organizations. These societies do not meet jointly and their work as a whole is not a public affair.

The school authorities leave it largely to the parents as to what extent children shall participate in social or non-scholastic affairs but urge that these affairs be limited in number, and that participation be confined to the latter part of the week when it is least likely to interfere with the regular school work.

DR. CLYDE H. GARWOOD

Superintendent of Schools, Harrisburg, Penna.

Interest in Dr. Garwood has increased since he has become the head of the school system which has been the center of bitter contention over school sites and school buildings. Through it all, he has held firmly to the helm, avoiding rocks and shoals, and heading straight for the harbor. Dr. Garwood is a native of Pennsylvania, holds college degrees and has been in school work for a quarter of a century. He came to Harrisburg last May.

—Somerville, Mass. On March 3rd the Northeastern Junior High School was opened with a membership of 1,372 pupils. The school is entirely occupied and accommodates the pupils of the seventh and eighth grades in two grade buildings. These latter are now entirely available for grade pupils in these neighborhoods. Through various changes in the several buildings it has been possible to place half-time classes on full time and to reduce overlarge classes to normal size by the opening of new classes.

ADMINISTRATION OF THE TOXIN-ANTITOXIN TREATMENT FOR DIPHTHERIA

The toxin-antitoxin treatment for diphtheria was recently administered to the primary children in the schools of Leonia, New Jersey, where consent of the parents had been previously obtained. The work was carried out with the cooperation of the board of health and under the direction of the school physician, Dr. Frances B. Tyson, assisted by the school nurse, Grace Jackson.

The method of approaching the children was unique and the plan was so successful that the children looked forward to the visit of the doctor and nurse. At the doctor's office the children were allowed to select a design to be painted on their arm in iodine. One chose an Easter bunny, another a carrot, one had a picture of his teacher, and still another his own likeness. After each had made his choice, the nurse made a rough drawing with a brush. The syringes had been previously filled with the serum and wrapped in towels out of sight of the children. There was a simulation of a mosquito buzzing away and little bunny rabbit was bitten right in the neck. The terror of the ordeal was absent because the play element had eliminated the objectionable feature. The treatments were successfully administered without a sign of difficulty.

Credit for the success of the treatment is given to Dr. Tyson, the school physician, and to the school nurse, Miss Jackson.

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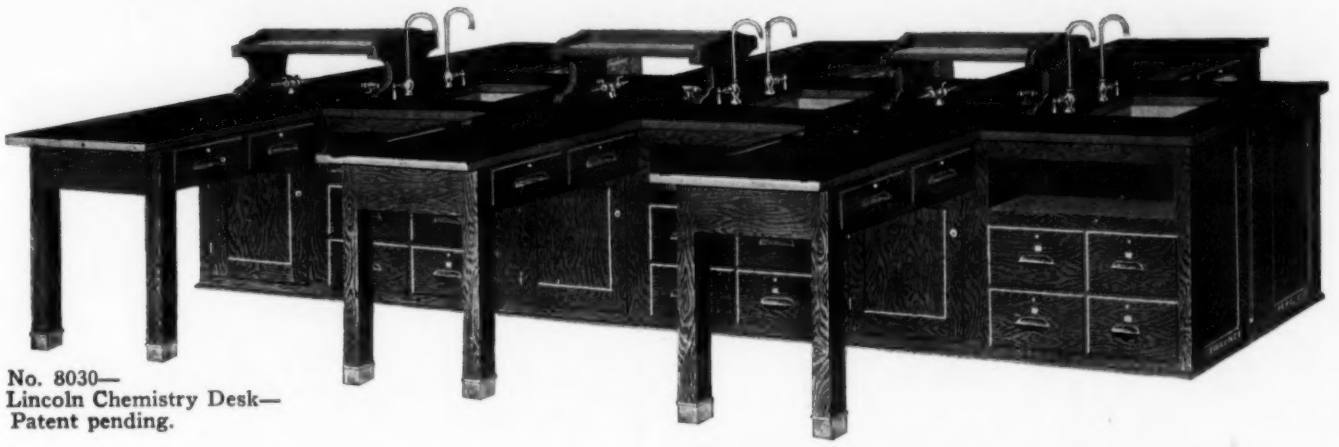

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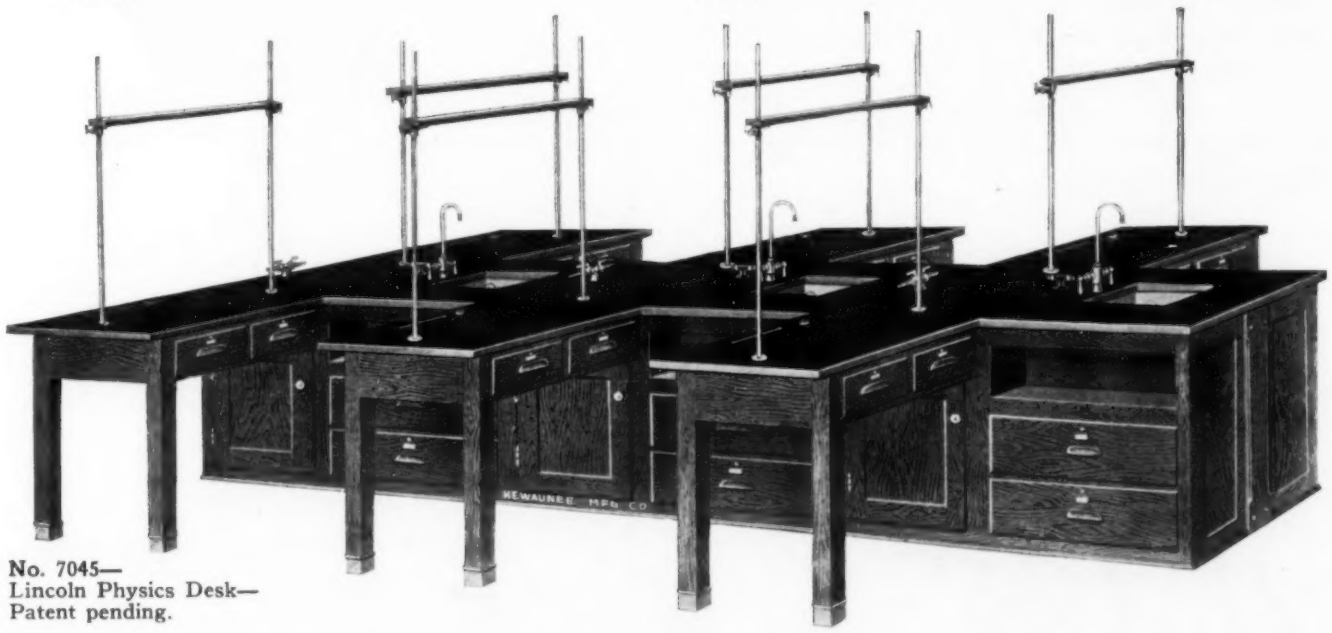

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Address all inquiries to the factory, Kewaunee, Wisconsin.

"Tommy Spence was left back"—

AN earnest little fellow, too! He tried hard but he just couldn't make the grade.

But Tommy had trouble with his eyes—and his desk was off in the far corner of the room. His teacher didn't know that he didn't get enough light and fresh air. Nobody knew, not even Tommy.

How often little Tommy Spences are handicapped by window shades that do not permit proper light and fresh air to enter. And remember, beside detracting from his enthusiasm, education and health, every Tommy Spence in your school **costs your community additional money,** for his progress is slower.

This summer—while the classrooms are empty, equip the windows with Hartshorn window shades mounted on Hartshorn rollers with double brackets. Make sure that Tommy Spence will be promoted next term.

Far-sighted school boards favor Hartshorn window equipment because it makes perfect ventilation and lighting possible.

Distributed by converters throughout the entire country.

Write for colors sage, linen, putty, dust, dill, and in Tinted Cambric specially adapted for school use. They have been approved by competent chemists.

School boards of many municipalities have adopted this scientific control of light.

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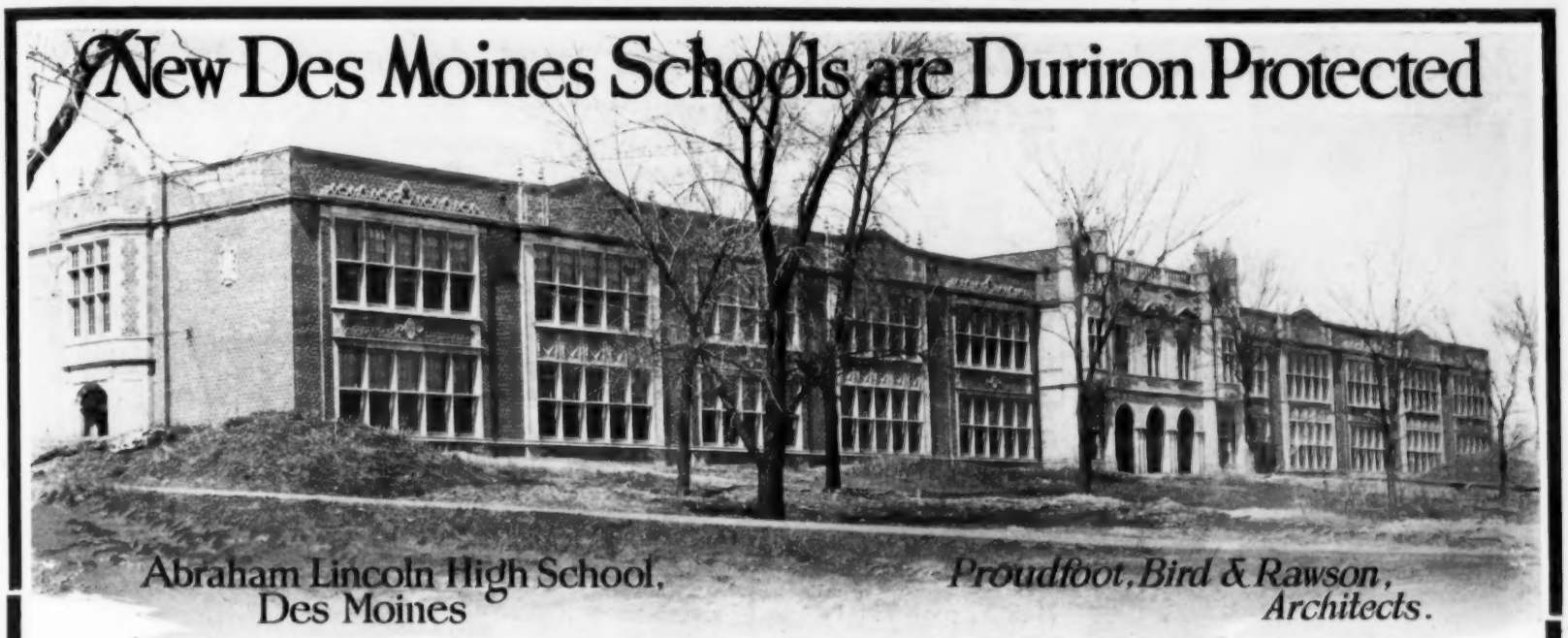

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Everywhere architects and engineers are making Duriron pipe their standard specification for all conditions where acids or acid wastes are handled.

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MERIT SYSTEM IN THE LARGER CITIES.

(Continued from Page 52)

ored shall remain in this class during the pleasure of the Board, and shall not be removed except by affirmative vote of a majority of the whole Board. The Board shall make such other provisions for the choice of teachers as it shall deem advisable.

New Bedford—We do not have the merit system. It has been discussed several times but because of salary conditions has never been adopted.

New Haven—We have no merit system at all in connection with the work or salary schedule of the New Haven schools. Our salary schedule involves the payment of the same salary to teachers of the same experience disregarding altogether the matter of the quality of teaching. There has been strong opposition from our teachers to the establishment of a merit system.

New Orleans—No merit system or rating of teachers prevails in New Orleans. The plan was attempted about eight years ago but was abandoned because of the great disquiet and dissatisfaction it caused.

State Controls New York Situation

New York—Salaries are regulated by statutes passed by the legislature of the state but dealing directly with the New York City Public school system. There are schedules of salaries for each kind and grade of position and schedules for positions of similar grade are similar. The schedules usually begin with a basic salary for the first year of service, and afford a designated increase for each year of service unless the teacher's service is disapproved, in which case she does not receive the increase for that year. There is also a statutory provision requiring the board of examiners to state the equivalent in terms of New York city experience, of the experience of an applicant in schools other than those maintained by the city of New York.

Norfolk—Teachers whose work is not satisfactory are not retained in the system. Salary increases are based on years of service on the annual increment plan. When applications are received forms are sent to persons given as reference which call for opinion on such points as scholarship, success as a teacher, ability as a disciplinarian, special training in grade or subject, personality, moral character, cooperation, and habits or peculiarities likely to interfere with success. An efficiency record, filled in at the office of the board of education, rates the teacher as poor, medium, good, or excellent on five general points subdivided into thirty-four items. On the first of November, January, February, and April principals are asked to rate the teachers in their respective buildings on technique of teaching, school management, and cooperation and professional growth. When a teacher is rated "medium minus" or lower, a special detailed report is required.

The Splendid Oakland Plan

Oakland—Every year the superintendent sends to all of the training schools in California and in some nearby states a request for a list of their most distinguished graduates in the field of education. Each training school compiles a list of its own most desirable candidates, whether they are actively seeking new positions or not. The names are sent to the superintendent without consulting the candidates. The city then sends a communication to each candidate, requesting him to make application in the city of Oakland. This does not mean that the board of education employs all of the candidates who are recommended. The secretary of the board of education, in each case, receives from the appointment secretary, the data concerning each candidate, and then proceeds to make his own investigation, sending his own forms, and asking for fuller information whenever desired.

Each of the three superintendents reads all of the applications received from whatever source, and each one separately compiles the list of those he considers the best qualified. On comparing these lists, the board of superintendents is able to arrive at a list of highly desirable candidates, particularly suited to the needs of the Oakland schools. This list is recommended to the board of education and is invariably passed as the "preferred list." From this list vacancies are filled as they occur, with due consideration of the particular demands of each position.

Omaha—Promotions are made to higher positions in the school system on the recommendation of the superintendent. Attempt is made to train the teachers so that the better ones may become principals or supervisors in the city system. High schools are so organized that there are certain teachers who may take administrative responsibilities and be paid for that work, aside from those who are heads of departments. In one of the high schools there is an adviser of freshmen, an advisor of sophomores, an advisor of juniors, and an adviser of seniors. These persons are each paid $300 extra on their salaries for this work and their instruction as teachers is limited to four periods a day.

Paterson—Teachers in both elementary and high schools are paid on a schedule the limits of which are defined and which permits an annual increase. In the elementary schools before the annual increase is granted the principal of the school files with the superintendent a detailed report on the teacher's work. If this report is satisfactory the increase is recommended. If it is not satisfactory the teacher receives no increase. To advance beyond the mid-point of the schedule teachers must secure a promotional certificate which may be obtained by examinations in professional subjects or by presenting to the superintendent and the city board of examiners evidence of the satisfactory completion of eight courses of lectures of thirty hours each, such lectures being given in connection with the extension departments of specified institutions or recognized summer schools. No promotional certificate is required of high school teachers.

Conservative Plan of Philadelphia

Philadelphia—All teachers in Philadelphia schools are appointed from eligible lists in the order of standing, such lists being made up from competitive qualifying examinations given by the superintendent and the board of examiners. These examinations are written and oral. All promotions except to the principalship of high

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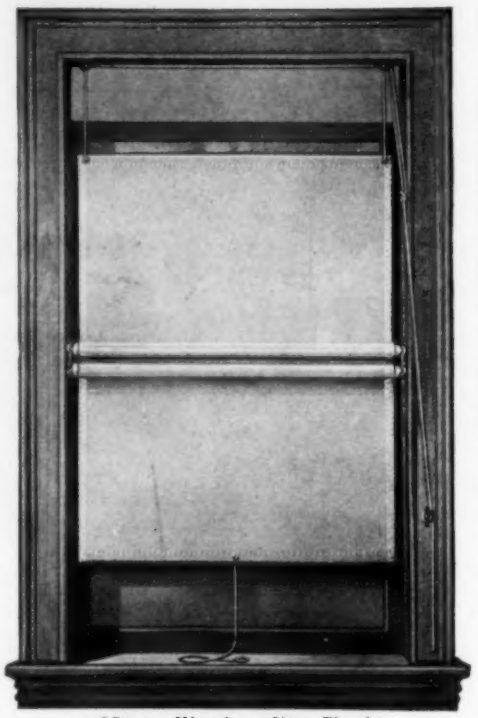

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Makes possible a proper circulation of air and insures an abundant light distribution.

Fixtures in both drawings are exaggerated in size to show details more clearly.

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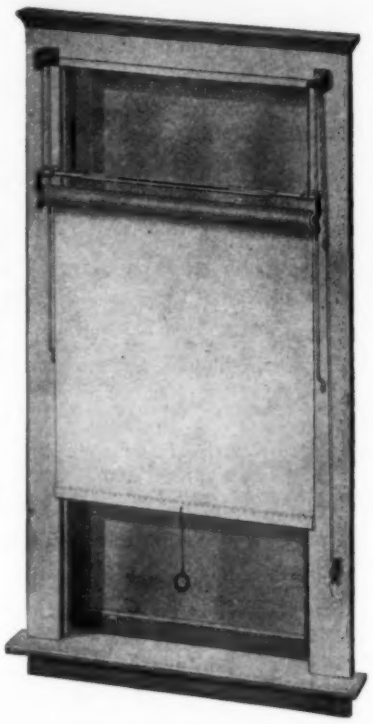

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schools, junior high schools, directorship of departments, and assistant superintendents are made from eligible lists as above described. The first year of all new appointees is a probationary year. A satisfactory rating for that year's work is necessary for continuance in position. Again at the middle of the salary schedule, in passing from A to B of the schedule, a rating of good is required, and in the high schools there is a third division of the salary schedule known as "C" to which teachers are promoted who have a rating of superior, present satisfactory evidence of a certain amount of postgraduate study, submit a thesis showing constructive scholarship, and submit evidence of active participation in professional organizations.

Providence—A rating card is supplied to principals who are asked to rate teachers as excellent, good, medium, poor, or very poor on four qualifications. These qualifications, which are subdivided into many items, are personal qualifications, professional qualifications, school management, and instruction. Each rating is given a numerical weighted value on the basis of a thousand points and the total of these separate values supplies the teacher's general rating.

Richmond—Teachers are reported on monthly and annually by principals and supervisors. Those who are unsatisfactory are dropped at the end of the first year and those who show promise but who are not up to standard are told of their deficiencies and given a half year or a year more on trial. Teachers who show extraordinary ability are promoted to teach special classes, or to be assistant supervisors, supervisors, or principals. Such persons are frequently furloughed on pay to study and prepare for higher positions.

Outstanding Merit in Rochester

Rochester—Recommendations for increase in salary beyond the normal maximum is based on some outstanding feature of a teacher's work that her colleagues would recognize. Before a teacher is permanently appointed she must have the recommendation of the principal and all the directors who come in contact with her work. Principals and directors, who must rate supply teachers and those considered to be "doubtful," are supplied with a rating card which calls for the rating of personal equipment, teaching ability, professional equipment, professional attitude, and housekeeping. Each subhead under these five general points is rated as inferior, normal, or superior and a general rating derived therefrom.

Salt Lake City—Three forms are used in rating teachers in service. The first form contains an explanation of the terms, "professional and personal equipment" and "results," on which teachers are to be rated by principals and supervisors, and is distributed among the teachers. The second form is the rating card to be used by principals and is filled out by them in the superintendent's office in February. It is made up for the rating of the two general qualifications mentioned above. The third form is used annually by the superintendent to compile the reports of the ratings of principals and supervisors at the time of election of teachers. Teachers rating A are given special salary consideration, B teachers receive regular salary increases, while C teachers are not re-employed unless there are extenuating circumstances for failure.

San Antonio—Although a merit system has been discussed none is in use.

San Francisco—No merit system in use. A revised body of rules and regulations now in preparation provides for improved procedure for recognition of merit in the school system.

Scranton—All applicants shall take both written and oral examinations. The former counts 60 points and the latter 40. The oral examination is conducted by the Board of School Directors and takes into consideration successful experience, scholastic and professional record, and personality. Those having the highest marks shall be rated first and appointed first. Where two candidates have the same rating, preference shall be given to the one with the longest experience. Eligible lists are made up once each year. For promotion the superintendent rates elementary teachers, the superintendent and high school principal rate high school teachers, and the superintendent and supervisor of kindergartens rate kindergarten teachers.

Seattle—Although a merit system is desirable none is in use at the present time.

Spokane—No merit system is in use in the Spokane schools.

St. Louis—Principals are required to prepare two reports. One is a written report summarizing the teacher's worth to the system as judged by her management of children, instruction, attention to details of school business, scholarship, professional interest and zeal, and personal qualifications. The other report is the summary rating of all teachers in the principal's building on the two bases of practical efficiency and professional qualities. With the latter the principal may insert a request for promotion or transfer of any teacher.

St. Paul—Promotion is based upon merit "within broad lines." Salaries are largely determined on experience and training.

Merit and Rating Count in Syracuse

Syracuse—Grade teachers are appointed from merit lists created by examinations conducted by a committee consisting of the supervisor of grades, several principals, and the superintendent. In the case of the kindergarten examination the supervisor of kindergartens and one or more kindergarten teachers are substituted for the principals. These committees go into the training experience, and general fitness of the candidates for the work. Correspondence is had generally with persons under whom the person has taught, unless that matter be covered entirely by the recommendations submitted. As a result of each of these examinations merit lists are created on which candidates considered worthy are ranked. Appointments are made from these lists in order of standing. Teachers in service are rated by principals annually upon the bases of teaching ability, professional attitude, and personality on a seven point scale, a rating of poor or very poor serving as a warning or cause for dismissal.

(Concluded on Page 115)

Kotex solves the schoolgirl's problem

Vending cabinet will be installed in school rest-rooms, free, to sell Kotex at cost

HELPING young girls to be as well as they ought to be is surely one of the fundamentals of education. Instruction on matters of health and hygiene is customary at most public schools. The next step is to provide girl pupils with the greatest of all aids to health and consequent efficiency.

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The Kotex Personal Service Cabinet, which we provide free, takes care of the dispensing of Kotex—automatically. Complete information as to our special introductory offer forwarded by return mail. Just fill out and mail the coupon.

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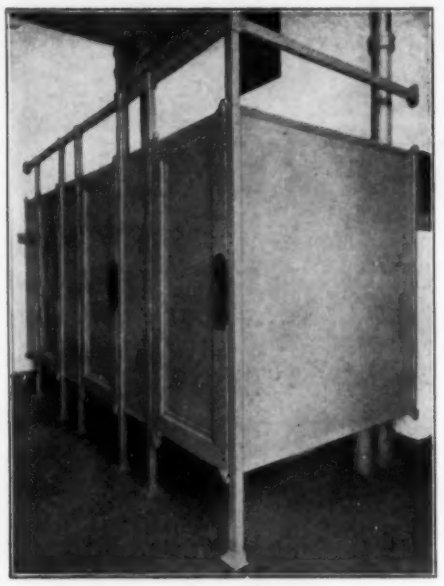

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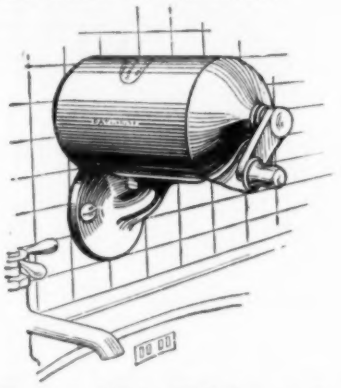

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Buffalo Forge Company

186 Mortimer St. **Buffalo, N. Y.**

MERIT SYSTEM IN THE LARGER CITIES.

(Concluded from Page 112)

Toledo—Teachers who are applying for state certificates and special work are rated by principals through the use of a card containing twenty items, very largely composed of questions to be answered by yes or no.

Trenton—Teachers are rated by principals on a five-point scale covering technique of teaching, class control, social service, and personal equipment.

Washington—Eligible lists are prepared as the result of three types of examinations conducted by the Board of Examiners: physical, written, and oral. A total of 60 points is allowed the written examination and 40 credits the oral examination. The latter is given to ascertain knowledge, education, experience, record as a teacher and a student (obtained from written documents submitted), culture, resourcefulness, and general personal fitness for the position as a teacher.

Wilmington—Merit system consists only in rating the teachers A, B, C on efficiency at the end of the year. For those teachers rated A, an increase of $100 per year is allowed; for those rated B, $50 per year; and for those rated C, no increase.

Worcester—No merit system in use, except as the selection of all teachers by the superintendent may be thought of as a merit plan.

Yonkers—No merit system is in use. There is need for one that will recognize personality as a factor in selection rather than placing too much emphasis on the results of examinations.

Youngstown—An automatic salary schedule is in operation but no merit system is employed.

A Summary of the Situation

A careful analysis of these 48 replies shows that fifteen, or 31 per cent, of these cities have no merit system worthy of description. Since seventeen cities did not reply to the letter, it may be assumed that in most of them, if not all, no merit system is employed. This would raise the per cent of cities having no merit system either for selection or promotion to the neighborhood of fifty, reference being made, of course, to the type of city concerned in this study—of one hundred thousand population or greater.

Of the remaining 33 cities, but seven, or fifteen per cent of the total, extend the merit system to include the selection of teachers. These cities are New York, Norfolk, Oakland, Philadelphia, Scranton, Syracuse, and Washington.[1] New York rates applicants on the basis of experience, Norfolk rates them on letters of reference, Oakland on experience-training-personal qualifications, Philadelphia, Scranton, and Washington on examinations, both written and oral, and Syracuse on special type examinations. The nearest approach to these plans of rating is the rating of substitutes before regular appointment in the city of Milwaukee.

About fifty per cent of the cities of one hundred thousand population or more have adopted merit plans for the promotion of teachers in service. These range all the way from the general rating of each teacher by the superintendent to the two-fold scheme employed in St. Louis where principals not only turn in annual lists of teacher ratings but are required to make special reports on individual teachers. There is evidence, however, of a tendency to place the emphasis upon the rating of teachers by principals through the use of score cards. While some of these cards are unwieldy and require much labor in their utilization, others have been refined until they are not only easy to use but return a rating that should be as representative of a teacher's general qualifications as any description possible. Most cards that have been prepared with care include the general points of professional fitness, personal qualifications, teaching technique, housekeeping, and results secured, or terms that imply somewhat the same meanings.

It is interesting to know that, although not more than fifty per cent of these large cities employ merit systems, but three superintendents stated that they had attempted adoption and failed, and but one superintendent frankly said that a merit system is not possible of utilization. The odds seem to be against the latter.

Of the cities included in this study, Oakland, California, seems to have made the nearest approach to the ideal system for selecting teachers on merit. The writer was not supplied the forms used in collecting data about Oakland applicants. Consequently, he can pass no judgment on the actual practices involved in making up the lists, but he does feel that Oakland is to be commended for the plan of searching out teachers with the highest qualifications and the final preparation of the "preferred list" to be submitted to the board of education. This is not altogether unlike the plan evolved in Cincinnati, which will be described in detail in an early number of this magazine.

[1]Cincinnati should be included in this list but is not treated here, since the merit system in use in that city is to be described in a separate article.

—At Haverhill, Mass., fifty parents petitioned the school board to close the Currier School because of its unsafe condition. The board at the close of the discussion decided to continue the present plan, closing one-half of the building and using the remainder for classes. The women have taken up picketing and have declared that they will continue this form of boycotting until the building is finally closed.

—Newark, N. J. The school construction budget for the next year calls for an expenditure of $1,824,000 for new schools, additional land and increased playground facilities. The largest item in the budget is $1,007,000 for the new West Side High School. The building will contain 28 classrooms, two gymnasiums, an auditorium and a number of special rooms.

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This is particularly true in the matter of lighting control. For this year's class play, any sort of lighting effects may seem "good enough." But the increasing emphasis upon dramatics and community entertainments will soon make a really adequate system of auditorium lighting control a *necessity*.

That is why far-seeing administrators are now installing the FA Major System of Lighting Control—not only to fill present needs—but because it is built to remain adequate for decades to come. It makes possible every combination of color, every degree of intensity and all the changing glows that are required for the most effective pageants and plays.

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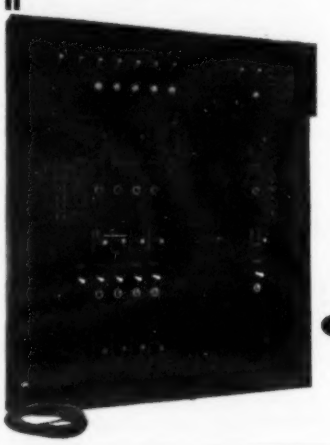

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TEACHERS AND ADMINISTRATION

—New Castle, Pa. Teachers with bobbed hair must let it grow again by next fall or forfeit the $100 increase in salary they will receive, under a clause in a new contract.

—Wichita, Kans. The school board has adopted a rule forbidding the employment of married women teachers in the future. Members of the staff who marry must forfeit their positions.

—Teachers are not deadwood, but their tenure of position in the schools is so uncertain they can hardly spend much money on additional training during the summer vacation, according to Miss Julia A. Spooner, president of the Portland Grade Teachers' Association, speaking before the Washington Grade Teachers' League. Miss Spooner declared teachers must make their influence felt outside the classroom and must take their problems to the outside world to get results.

—Delving into the personal and private affairs of school teachers is "entirely out of place," according to State Supt. F. G. Blair of Illinois, commenting recently on the action of the Mt. Vernon school board in prohibiting teachers from playing cards.

—As an aftermath of an arbitrary extra week's Christmas vacation foisted upon the teaching corps in 1923, the school board of Bridgeport, Conn., has presented the teachers with an unexpected bonus of $29,948. The city attorney had previously upheld the forty-week teaching year and had ruled that the teachers were entitled to the extra week because it was absorbed in the yearly recompense due them.

—Elgin, Ill. The school board has ruled that unmarried women be given preference in making up the teaching staff. The board has also inserted a clause in the teacher's contract making the contract null and void in case a teacher marries at any time prior to the close of the school year.

—Sullivan, Ill. The school board has adopted a rule providing that the contract of any teacher who marries during the term of service shall be automatically cancelled. Teachers are also required to undergo health tests in compliance with state rules.

—Martins Ferry, O. Teachers who use cigarettes are not to be recommended for appointment in the Belmont County schools.

—Revere, Mass. The school board has voted against the employment of married women as teachers.

—Seattle, Wash. The growth of the school population has made it necessary to employ 45 new teachers the coming year. Provision for the increase was made in the 1924 budget.

—"It is well that public school systems are demanding intelligence in teachers as well as the book learning that can be obtained by cramming," says the editor of the La Salle, Ill., Tribune. "If you look back you will find that the teachers who did you the most good were not those who drilled the most geography and arithmetic into your head, but those others to whom books were but guides in explorations of wide ranges of life."

—"We wish to make sure that the teacher will be assigned to a school where she will be happy," said William J. O'Shea, superintendent of the New York schools. "Because we believe that the best kind of service can come only from a teacher who is happy and who can be an example to the children in mental, physical, and moral growth. We endeavor also to please the principals of the schools. As far as possible principals are allowed a voice in selecting assistants and teachers."

—"Janitors employed by the state are paid twice the average salary of the white school teachers," said State Superintendent N. H. Ballard of Georgia recently. Legislative relief will be sought.

—The school board of Worcester, Mass., has adopted eligibility rules for teachers in the junior high school. The rules are as follows:

Teachers must qualify under A or B.

Under A, a teacher must be a graduate of a recognized college or normal school, with two or more years' successful experience in schools of a grade equivalent to the junior high school.

Under B, a teacher must be a graduate of a normal school of recognized standing with four or more years' successful experience in the upper grades of Worcester, or in departments of special work in schools similar to the junior high school.

Continuous and successful employment for at least ten years in a special department of the Worcester schools is considered in lieu of a college or normal school diploma.

—Teachers employed on the Island of Guam must attend a summer school annually, during the months of June and July. No teacher is exempted from attendance except for illness, and all receive full pay while in attendance at school.

—The teachers of Richmond, Va., have a one hundred per cent record in meeting their quota of $3,500 for the erection of a teachers' preventorium. This building is sponsored by the Virginia Teachers' Association and is to be under the supervision of the state health department. The structure will be located near the state university and will cost about $40,000.

—Richmond, Va. The teachers are allowed five days' absence with pay, for illness during each school session.

—Sacramento, Calif. Teachers who have served for more than thirty years, and who in the judgment of the board of trustees employing them are physically or mentally incapacitated, may be compelled to retire on pension without a hearing, Attorney-General Webb has declared in an opinion given to W. C. Wood, state superintendent of schools.

The teachers' tenure act provides that a hearing must be given and charges preferred before any teacher may be dismissed but the attorney-general holds that the pensioning of teachers incapable of attending to their duties takes precedence over the tenure act.

(Continued on Page 118)

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THE AIR CONDITIONING AND ENGINEERING CO.

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(Continued from Page 116)

—Hartford, Conn. Claiming that they have been refused pay due them under the vote of the Brown School district which entitled each teacher who had served 25 years in the district and 35 years as a public school teacher to retirement on half pay as permanent substitute, three teachers have brought suit in the superior court to recover sums aggregating $8,000. The district committee believes that the teachers are entitled to pay only as provided by the state teachers' pension act. The teachers claim that the vote was passed in 1916 and never repealed.

—Butte, Mont. The school board has adopted a salary schedule providing for an increase of about three per cent in salaries.

Under the schedule, grade teachers completing their first or second year's service, will be paid $140 per month; those with third and fourth years' service will be paid $150; those with five years' service will be given $160; those with six years' service will be given $170; those with seven years' service will be given $180; those with eight years' service will be given $190, and those with more than eight years' service to their credit will be paid a maximum of $200.

High school teachers will be paid $180 for the first and second year's service; $190 for the third and fourth year's service; $200 for the fifth and sixth year's service, and $210 for the seventh and eighth year's service.

—Eau Claire, Wis. The board has approved teachers' contracts carrying with them increases under the present automatic salary schedule increases based on number of years' experience in teaching. Under the automatic credit increases, teachers' salaries are increased $5 per month over the preceding year's salary for each year's experience, up to six years.

—The assembly bill, fixing equal pay for men and women teachers, passed by the New York State Senate in April, has been submitted to the governor for signature. The bill provides an increase of $90,000 in the salary budget for high school teachers.

ADOPTS SALARY SCHEDULE

The following salary schedule was adopted by the town school committee of Wallingford, Conn.:

Elementary Schools—Kindergarten Through Grade Eight. In computing beginning salary successful experience elsewhere in graded schools will be recognized.

Kindergarten — Grade Five (inclusive) — Minimum, $1,000; maximum, $1,400, with extension work, $1,600.

Rural Schools—Minimum, $1,000; maximum, $1,400, with extension work, $1,600.

Grades 6, 7, 8 (departmental)—Minimum, $1,100; maximum, $1,500, with extension work, $1,700. Annual increments of $100 for two years followed by increments of $50 for four years. Assistants to principals shall receive $100 above schedule. Teaching principals shall receive $200 above schedule.

High School—Grades 9-12 Inclusive. In computing beginning salary successful experience elsewhere in accredited secondary schools will be recognized.

Women (academic)—Minimum, $1,200; maximum, $1,800, with extension work $2,000.

Women (non-academic)—Minimum, $1,200; maximum, $1,600, with extension work, $1,800.

Annual increments of $100 for four years followed by increments of $50 for four years. For work involved in appointment as dean of girls or department head the maximum shall be increased $100.

All other salaries shall be fixed by vote of the town school committee on recommendation of the superintendent of schools.

The salary increases through professional study follow:

Teachers after appointment in Wallingford may increase their salaries by securing credits for professional study and improvement as follows:

1. Twenty-five dollars for the satisfactory completion with credits of a course of study, previously approved by the superintendent of schools of thirty hours of recitation and lecture, with the required preparatory work, provided, however—

2. That no teacher shall thereby receive an increase in salary of more than $50 in any one year, or of more than $200 during the period of service.

3. Such credit salary increase shall be added to the regular salary of the school year following that in which study and improvement were made. Such salary increases shall thereafter be permanent during the period of service.

4. Such courses may be taken in Wallingford or elsewhere while in service, but in all cases the course shall be approved for credit by the superintendent of schools, and the teachers shall complete satisfactorily the work of the course as may be required for credit in the institution in which it may be taken.

5. These provisions relating to credit apply to all teachers and principals.

The committee reserves the right to pay salaries in excess of rates under this schedule in cases where special merit and circumstances warrant, but only upon recommendation by the superintendent of schools.

TEACHERS' SALARIES

—New Haven, Conn. The school board has asked the board of finance for an additional $75,000 to cover increases in teachers' salaries for the next year.

—Orchards, Wash. The school board has granted increases to the grade teachers, bringing the salaries up to $130 a month.

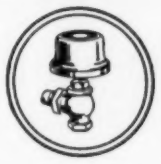
—Worcester, Mass. The school board has adopted a new salary schedule for teachers employed in the junior high school. The schedule is as follows:

Principal, no minimum, $150 yearly increase, maximum, $4300; assistant principal, minimum, $3200, increase, $125, maximum, $3450; teachers with degrees, minimum, $1500, increase $100, maximum, $2300; teachers without degrees, minimum, $1400, increase, $100, maximum, $2600; head clerk, minimum, $100, increase $75, maximum, $1500; clerks, minimum, $900, increase, $75, maximum $1400.

Teachers assigned to the Junior High School from the Worcester elementary schools will receive as a minimum salary $100 more than they would have received had they remained in the elementary schools.

—The teachers of San Francisco, Calif., have petitioned the board for an increase of $200 in salary. The granting of the increase would involve an increase of $450,000 in the school payroll.

(Continued on Page 120)



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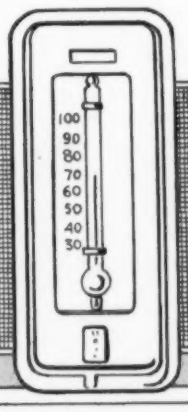
Cincinnati	Kansas City	Seattle	Vancouver, B. C.
Dallas	Los Angeles	San Francisco	Winnepeg, Man



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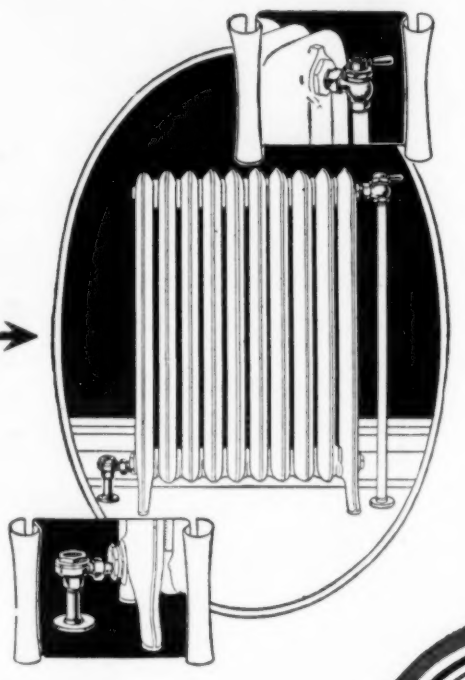
The Dunham Return Heating System for Schools.

AN economical and most satisfactory system of steam heating for medium size schools. Existing one or two pipe heating systems may be "Dunhamized" at reasonable cost, giving your school maximum radiator efficiency, and the use of every bit of steam in the radiators, because of the complete elimination of air and water from the radiators and piping, and the automatic return of condensate to the boiler. Insures quick circulation, easy control of heat. No "trouble-making," sputtering, hissing, leaky air valve when your school is equipped with the Dunham Return Heating System. Noisy, half-hot radiators waste heat. They should be "Dunhamized." Bulletin No. 109 shows how.



Sixty branch and local sales offices in the United States and Canada bring Dunham Heating Service as close to your office as your telephone. Consult your telephone directory for the address of our representative in your city.

C. A. DUNHAM CO.
230 East Ohio Street, Chicago

(Continued from Page 118)

—New Bedford, Mass. The Spaulding maximum salary of $1900 for elementary teachers provided for in the budget adopted by the city council, became effective on April 21st.

—Hartford, Conn. The statistics recently compiled by the state education department show that Hartford leads the city group in average elementary school salaries, the figure last year being $1,584. In high school salaries, Waterbury led Hartford slightly. The average in Waterbury was $2,247, while in Hartford, it was $2,237. Rockville was lowest in both elementary and secondary school salaries. In a second group of towns, Greenwich paid the highest average salary in both classes of schools. The average for elementary teachers there was $1,602 and for high school teachers $2,071. Groton paid the least to elementary teachers, the average being $861, while Stonington paid the least to high school teachers, who received an average of $1,183. In the third group, Farmington paid the highest average elementary school salary, $1,380 and Newtown paid the highest high school salary of $1,600. Sprague was at the bottom of the list in elementary school salaries, and Madison paid the least to high school teachers. The average salary paid to teachers in the cities of the state during the year 1922-1923 was $1,426. In towns which have no supervising agents and which do not come within the school grant rating, it was $1,219; in towns which do have supervising agents but which receive no school grant funds, it was $1,131; in towns with an equalized grand list of less than $3,500,000, the average salary per teacher was $1,000. Taking the state as a whole, and including all regular public-school teachers, the elementary school average was $1,423 and the high school average was $1,924.

—Lemmon, S. D. The board has given increases to all teachers on the staff. Grade teachers have been given increases of $5 a month. The salary of the superintendent was raised to $3,300 a year.

—Parnassus, Pa. The school board has adopted a salary schedule providing for minimum and maximum salaries of teachers. The schedule is as follows:

For elementary teachers, minimum $900, annual increment $100, and maximum salary $1,300. For high school teachers, minimum $1,200, annual increment $100 and the maximum salary $1,600. School supervisors, minimum $1,200, annual increment $100 and the maximum $1,600. For superintendents, minimum salary $3,000.

Elementary and high school principals who devote less than half their time to supervision and administration are classified as teachers under this salary schedule.

—Menasha, Wis. Teachers have been reappointed at increases of from $25 to $100 a year.

—The school board at Washburn, Wis., has ordered a ten per cent decrease in teachers' salaries which has made it somewhat difficult to retain old teachers. It is expected there will be a number of changes on the teaching force next year.

—Shaker Heights, O. The school board has adopted a resolution placing the teachers of the city schools on a twelve months' salary basis. Under the plan, a teacher's salary is divided into twelve installments, each payable the first day of the month. Under the old plan, there were twenty installments covering the period from September to June. The new plan becomes effective on September first.

RULES AND REGULATIONS

—The New Britain, Conn., board of education has instructed Superintendent Stanley H. Holmes to enforce the vaccination regulation.

—The Cleveland, Ohio, board of education has decreed that "continuance in service of a woman teacher who marries shall be subject to recommendation by the superintendent and approval of the board."

—The board of education of Stevens Point, Wis., will bar political meetings from its new high school and its auditorium.

—The school board at Richmond, Va., has readopted a rule forbidding collections in the schools.

—The Union Board of High Schools of Cincinnati has been informed by the superintendent of a recent ruling of the state attorney-general that fraternities and sororities are forbidden in high schools. In Cincinnati high schools there are 211 boys and girls listed as members of these forbidden societies. Students will be given the privilege of voluntarily withdrawing from membership. Where students fail to do so, it will be the duty of the board to see that the law is enforced.

PROFESSIONAL LOYALTY

Observers of recent tendencies of American schools sometimes decry the unprofessional attitude of certain teachers. They find in the activities of certain teachers' federations and associations a tendency to equalize teachers and to consider educational problems only in the light of the financial return which comes to the teacher in the shape of salary and pension. Pessimistic observers who pass their opinions on newspaper reports and statements by certain leaders are frequently mistaken because the truly professional teacher generally hides her light under a bushel and modestly performs her work from week to week and year to year. Occasionally, however, a fine example of true professional spirit is reluctantly made public by a superintendent. Following is a letter received by a County Superintendent of Schools in Alabama. The young lady who wrote the letter is continuing her present position at a sacrifice of $200 in salary.

April 17, 1924.

County Supt. of Education.

Dear Mr. ————:

You and daddy have certainly "stolen a march on me" by carrying on this correspondence.

However, I am glad, for it gave me once more a feeling that I knew what I wanted to do.

Miss ———— of the ———— Works was here last Wednesday and offered me $—— for sixth, seventh and eighth grade work. Her salary was very interesting, but that was the only attractive feature.

After having that conference with you my mind was made up to return. If A. E. A. had not been in Montgomery, and I had not attended no one else would have thought of ————.

Be that as it may with everything weighed, money and all, I am returning a signed report of my intentions.

I wish also to say that you, Miss ————, and Miss ———— will never know how much you've done for me. That helpful cooperative spirit went a long way in helping me make my decision.

I thank you for writing that nice letter to my father.

Sincerely,

————.

BRYANT JUNIOR HIGH SCHOOL, MINNEAPOLIS. F. H. HAFEY IS THE ARCHITECT. CRANE PLUMBING WAS INSTALLED BY A. W. SCOTT AND COMPANY UNDER THE SUPERVISION OF THE BUREAU OF BUILDINGS AND INSPECTION OF THE MINNEAPOLIS BOARD OF EDUCATION

THE MARK OF DEPENDABLE SANITATION

When the specifications of a plumbing installation call for Crane piping materials and Crane fixtures, you can be reasonably certain that the designers have also made the other provisions necessary to insure safety and long life throughout the system. Generally conceding that the Crane name indicates the highest of quality standards, leading architects and engineers make "Crane" their basis of comparison when thorough dependability is essential. With Crane branches carrying stocks of Crane piping and fixtures in every important city in the country, you need never accept materials that fall short of the recommended Crane quality.

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Branches and Sales Offices in One Hundred and Forty-five Cities
National Exhibit Rooms: Chicago, New York, Atlantic City and San Francisco
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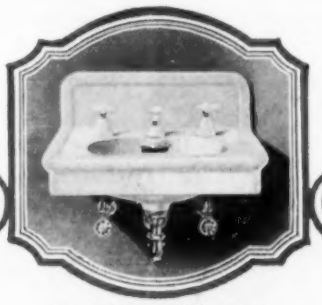
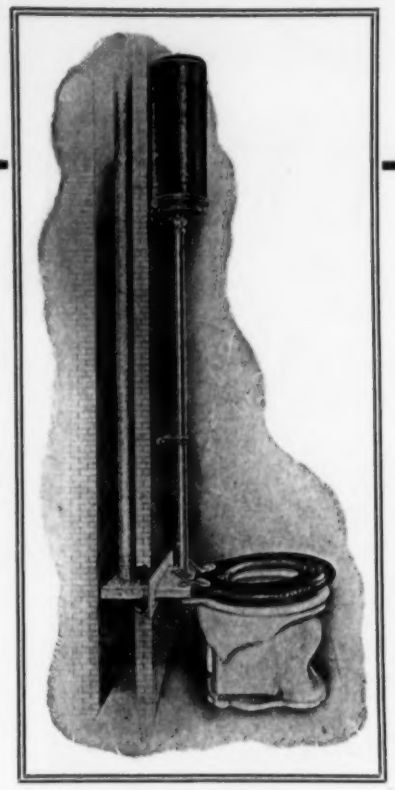
CRANE EXPORT CORPORATION: NEW YORK, SAN FRANCISCO
CIE CRANE, PARIS



Crane "Clermont" Lavatory



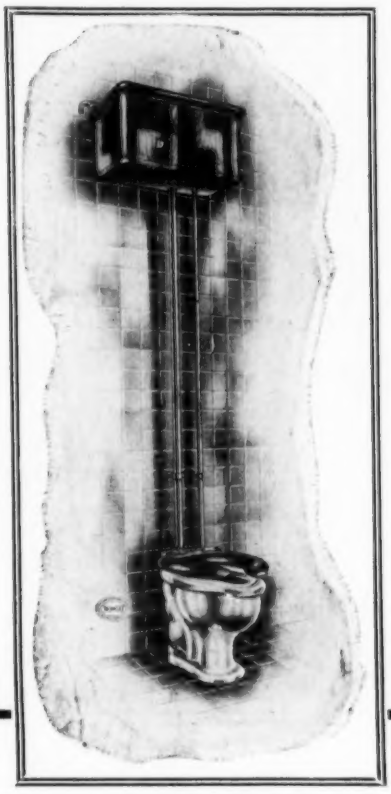
"Guaranteed"

All plumbing fixtures bearing the NONCO trade mark are guaranteed to be of the best quality and give entire satisfaction to schools. There is no question as to their excellence of design and finish. Their endurance and wearing qualities are a matter of record.

NONCO plumbing fixtures reflect in every detail the accumulated knowledge and skill of over 45 years of experience in manufacturing plumbing fixtures for schools. You can't go wrong when you install NONCO brand of plumbing goods.

Write today for complete information

N. O. Nelson Mfg. Co.
St. Louis, Mo.



BRANCHES

Salt Lake City, Utah.	Houston, Tex.
Birmingham, Ala.	Little Rock, Ark.
Los Angeles, Calif.	Davenport, Ia.
Memphis, Tenn.	Pueblo, Colo.
Dallas, Tex.	

Pioneer Manufacturers of Plumbing Fixtures for Schools

PERSONAL NEWS OF SUPERINTENDENTS

—Supt. J. B. Russell of Wheaton, Ill., has resigned after a service of 29 years.

—Supt. G. C. Mayhew of Virdens, Ill., has been reelected for the next year.

—Supt. R. D. Brown of Grant City, Mo., has been reelected for a sixth consecutive term.

—Supt. G. F. Glendening of Moline, Kans., has been reelected for the next year.

—Mr. W. E. Moore of Nashville, Tenn., has been elected superintendent of schools at Franklin, to succeed A. J. Haun.

—Supt. Amos Grothe of Rapid City, S. D., has been reelected for a sixth term.

—Mr. J. B. Forsythe has been elected superintendent of schools at Cherokee, Kans.

—Mr. G. E. Watson of Stevens Point, Wis., has been elected superintenedent of schools at Waupaca, to succeed E. G. Lange resigned.

—Supt. W. R. Curtis of Alton, Ill., has been reelected for the next year.

—Supt. Paul Keller of the Waukegan, Ill., township high school has announced his resignation at the close of the school year.

—Supt. L. E. Gayman of the Caledonia, O., centralized school, has announced his resignation at the close of the school year.

—Supt. Frank L. Smart of Davenport, Ia., has been reelected for another three-year term, at a salary of $6,250 per year.

—Supt. J. H. Winstrom of Springfield, Ill., has been reelected for the next year.

—Supt. F. B. Harris of Lebanon, O., has been reelected for a third term of three years.

—Supt. J. H. Riser of Juliette, Ga., has been reelected for another year.

—Supt. T. W. Stanley of Weatherford, Tex., has been reelected for another term of two years.

—Mr. R. E. Balliette of Port Washington, Wis., has been elected superintendent of schools at Sturgeon Bay, at a salary of $3,500.

—Mr. H. I. Tice of Rankin, Ill., has resigned and will enter the University of Illinois in preparation for a master's degree.

—Supt. C. E. Spaulding of Tipton, Ind., has announced his resignation on August first.

—Supt. W. F. Shirley of Marshalltown, Ia., has been reelected for another three-year term.

—Mr. S. W. Gentry of Kingsport, Tenn., has accepted the superintendency at Princeton, W. Va.

—Supt. E. V. Bowers of Galion, O., will retire at the close of the school year.

—Mr. E. S. Kerr of Wellington, O., has been elected superintendent of schools at Martins Ferry, to succeed R. C. Maston, who goes to Elyria.

—Supt. Darrell Joyce of Hamilton, O., has been appointed to serve on a special committee which is to study school problems in Ohio. Among the problems to be taken up by the committee will be school tax rates, building construction, financial resources, teacher shortage, overhead costs, supervision, platoon plan, salaries and general school efficiency.

—Supt. J. G. Walvoord of Sheboygan, Wis., will retire on July first.

—Supt. Glen E. Sunderlin of Spirit Lake, Ida., has been relected for another year.

—Mrs. Minnie D. Bean has been elected assistant superintendent of city schools at Tacoma, Wash.

—Supt. A. C. Thornton of Charleston, Wash., has been reelected for the next year.

—Supt. J. P. Street has been reelected head of the schools at Bedford, Ia.

—Mr. C. A. Gwinn of Cameron, Mo., has been elected superintendent of schools at Aurora, to succeed Mr. Clayton.

—Supt. A. H. Smith of Winters, Tex., has been reelected for the next year.

—Mr. A. C. Ellis of Gatesville, Tex., has been elected superintendent of schools at El Camo.

—Mr. E. B. Perry has been elected superintendent of schools at Washburn, Wis., at a salary of $2,200.

—Mr. J. C. Ingram has been elected superintendent of schools at Goose Creek, Tex., to succeed J. F. Crawford.

—Supt. R. W. Bardwell of Rock Island, Ill., has been reelected for the next year.

—Supt. J. M. Logan of Eagle Grove, Ia., will receive an increase in salary. Mr. Logan will begin the second year of his present three-year term.

—Mr. R. H. Graham of Sutton, Neb., has been elected superintendent of schools at Auburn, at a salary of $2,750 a year.

—Supt. Homer D. Knowles of Quitman, Ga., has been unanimously reelected for the next year.

—Supt. Wm. C. Hobbs of Bristol, R. I., has been reelected at a salary of $3,000 a year.

—Supt. Alvin C. Kibbey of Shelbyville, Ind., has been reelected for the next year. Mr. Kibbey was elected to succeed the late J. W. Holton in January last.

—Supt. J. W. Caplinger of Maysville, Ky., has announced his resignation at the close of the school year.

—Supt. J. C. Bond of Macon, Mo., has been reelected for another year.

—Supt. T. F. Hames of Heavener, Okla., has been reelected for the next year.

—Supt. T. W. Gosling of Madison, Wis., has been reelected for another three-year term.

—Supt. H. H. Hutton of Kingsville, Tex., has been reelected to serve another year.

—Supt. Gladstone Califf of Richland, Ia., has been reelected for the next year.

—Mr. L. E. Mantor has been elected superintendent of schools at Wapello, Ia., to succeed I. F. Finger.

—Supt. W. L. Rhea has been reelected for the next year at Mediapolis, Ia.

—Mr. C. W. Price of Grass Lake, Mich., has been elected superintendent of schools at Jonesville.

—Supt. T. J. Tormey of Grundy Center, Ia., has been reelected for another year.

—Earl W. Anderson of Charleston, Ill., has resigned to enter the State University.

—Supt. J. E. Langwith of Terrell, Tex., has been reelected for another year.

—Mr. F. M. Shelton of Elyria, O., has assumed the superintendency at Springfield. Mr. Shelton is succeeded by R. C. Maston.

—Supt. John S. Clark of the Waukegan, Ill., grade schools, has been reelected for the next year.

—Mr. E. D. Jungerman of Nixon, Tex., has been elected superintendent of schools at Pearsall, to succeed Mrs. T. D. Simmons.

—Mr. O. H. Setzepfandt of Eagle Grove, Ia., has been elected superintendent of schools at Rolfe.

—Supt. W. L. Coggins of Southington, Conn., will retire on June 30th.

—Mr. R. C. Maston, of Martins Ferry, O., on April 7th assumed the superintendency at Elyria.

—Supt. R. J. Condon of Cincinnati has made application for a year's leave of absence to take up special work on the editorial staff of the Atlantic Monthly. Mr. Condon is completing the last year of a five-year contract.

—Announcement has been made of the marriage of Assistant Supt. E. D. Roberts of Cincinnati, to Miss Roseabelle G. Mitchell, secretary to Supt. R. J. Condon.

—Supt. A. A. Slade of Casper, Wyo., has been reelected for the next year, at a salary of $7,500, together with traveling expenses in attending conventions. Casper is a city of 30,000 population and takes first place in the production of gasoline. Sufficient gasoline is produced in one day to keep 850,000 automobiles running 24 hours.

—Supt. G. W. Beswick of Poplar Bluff, Mo., has been reelected for a seventh consecutive term.

—Supt. Wilmot G. Whitfield of Roslyn, Wash., has been reelected for another year. Mr. Whitfield is completing his ninth year of service.

—Mr. Nelson C. Smith, supervising principal at Leonia, N. J., has been reelected for the next year at a salary of $4,500. Mr. Smith will enter upon his fourth year of service in Leonia.

—Supt. D. E. Wiedman of Bellingham, Wash., has been reelected for another three-year term.

—Supt. O. H. Plenske of Menasha, Wis., has been reelected for a three-year term.

—Mr. J. W. Browning of Washburn, Wis., has been elected superintendent of schools at Rhinelander. Mr. E. B. Perry, formerly principal of the high school, succeeds Mr. Browning at Washburn.

—Supt. James H. Harris has been reelected at Pontiac, Mich., for a term of three years, beginning with July first.

—L. B. McGuffin, Superintendent of the Yoakum Public Schools, has recently been reelected to the position for two years.

—Supt. Jeremiah E. Burke of Boston has been reelected for six years by unanimous vote of the school Committee.

—R. G. Vinson, Principal of Royse City, Texas, Public Schools has accepted a similar position in the schools of Ocilla, Ga.

—L. C. Montgomery was recently reelected as Supervising Principal of the Cambria Schools at a salary of 2300, an increase of $300 over his last year's salary. salary.

—Mr. G. E. Everett of Lakeland, Florida, has been reelected supervising principal at an increase of twenty-five dollars a month.

(Continued on Page 124)

UNUSUALLY STURDY IN CONSTRUCTION
DEPENDABLE IN OPERATION

PLATE 205

UNIVERSAL SEAT ACTION CLOSET

Includes siphon jet bowl; two-piece oak seat with malleable galvanized hinge and "HAAS" Universal Seat Action Valve with Compression Stop in white nickel finish.

Can be furnished with polished nickel plated valve, nickel plated cast brass hinge and operating lever, if specified.

Universal Seat Action Closets, or "Haas" Plate 200 Line, have a direct action type of valve which may be installed over staple bowls of either siphon jet or washdown pattern.

With the regular piping required for flush valves, the action of the Universal is quick and positive, giving a thorough flush with pressures as low as fifteen pounds.

HAAS SEAT ACTION CLOSETS are ideal for schools and other public institutions where constant use is accompanied by frequent abuse, and where dependability and freedom from repair are essential. Haas Products have met the most rigid requirements for a quarter of a century and have triumphed over the most adverse conditions.

There is a **service reason** for the liberal guarantee that accompanies every Haas Valve.

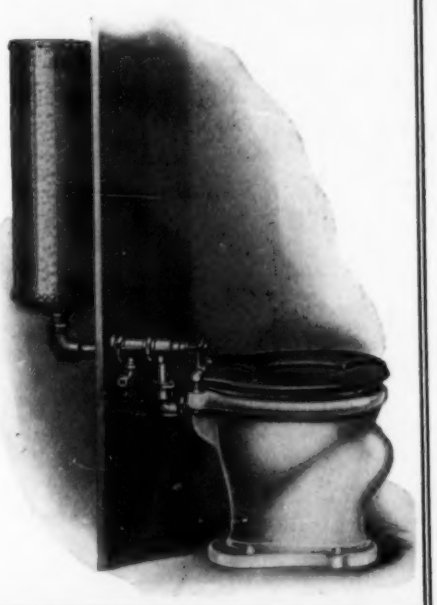


PLATE 706

PRESSURE TANK SEAT ACTION CLOSET

Includes washdown bowl; two-piece oak seat with malleable galvanized hinge; 8″ x 24″ galvanized pressure tank and "Master" valve. Equipped with nickel plated trimmings if specified.

The Plate 700 Line is designed for installation with small supply piping; for use with staple siphon jet or washdown bowls and with concealed or exposed tank.

Send for Catalog—
With Roughing Charts

HAAS FLUSH VALVES

PHILIP HAAS COMPANY

DAYTON **OHIO**

Wire school buildings the best way!

Wiremold conduit is the ***best*** for surface wiring, because it is sturdy, good-looking, easiest to apply,and least expensive.

HAVE the wires run on the surface, encased in strong, rigid Wiremold Conduit. Then when you want to re-arrange class-rooms, to move partitions, you can change the position of your lights, swiftly and economically, without the mess or fuss of tearing open walls and ceilings.

For well-wired school buildings

Specify WIREMOLD CONDUIT

American Wiremold Co., Hartford, Conn.

(Continued from Page 122)

—Charles E. O'Neill, formerly principal of school No. 178, Brooklyn, has been named associate superintendent of the New York schools.

—Reelections of Superintendents in Kansas: H. P. Study, Atchison, salary $5,100; J. A. Fleming, Bonner Springs; A. D. Zook, Wellington, salary $3,100. Elections: W. O. Stark, Mulvane; F. L. Schlagle, assistant superintendent, Kansas City, salary $4,000.

—Mrs. Josephine Corliss Preston has announced her candidacy for reelection to the state superintendency of Washington. While she will have opposition it is believed she will be reelected.

—The women candidates for county superintendencies scored in the Iowa elections. Among the successful ones are: Mrs. Allie Paine, of Marengo, for Iowa county; Jane McCormick, of Tipton, for Cedar county; Lulu B. Secrist, of Marion, for Linn county; Myrtle Jamison, of Wapello, for Louisa county; E. D. Bradley, of Muscatine, for Muscatine county; Elizabeth Trei, Clinton, for Clinton county; Estelle Coon, Brooklyn, for Poweshiek county, and Hermine Schnekloth, Davenport, for Scott county.

—Supt. L. E. Seitz of Commercial Point, O., has been reelected for a two-year term.

—Supt. J. R. Inman of Red Oak, Ia., has recently been elected president of the local Rotary Club.

—Mr. Eaton Summers of Lincoln, Ia., has been elected superintendent of schools at Randolph for the coming year.

—Mr. G. O. Smith, superintendent of schools at Princeton, Ill., and former county superintendent, has filed suit against the board of supervisors of Bureau County for $3,000. The suit is to collect back salary which Smith claims is due him.

—Supt. J. B. Smith of Brady, Tex., has been reelected for another year.

—Supt. H. Ambrose Perrin of Joliet, Ill., has been reelected for another year.

—Granville Stanley Hall, president-emeritus of Clark University, died at his home in Worcester, Mass., on April 24th, at the age of 78. Dr. Hall was born at Ashfield, Mass., in 1846. He was president of Clark University from 1888 to his retirement in 1920. He was the founder of the American Journal of Psychology, a fellow of the American Academy of Arts and Sciences and the author of many books.

—Mr. Charles J. Smith has been appointed assistant superintendent of schools at Mt. Vernon, N. Y. Mr. Smith will receive a salary of $3,400 a year and an allowance of $30 a month for the use of his automobile in connection with his duties.

—Mr. C. W. Crouse has resigned as superintendent of schools at Lebanon, Ill. Mr. Crouse is succeeded by Mr. E. M. Schueneman. Mr. Schueneman is a graduate of Central Wesleyan College and has been at Nashville for the past four years.

—Mr. R. H. Beall of Iowa City, Ia., has been elected superintendent of schools at Bellevue, to succeed C. C. Miles.

—Supt. E. E. Lewis of Flint, Mich., has been unanimously reelected for another year.

—Mr. George Hillier has been elected superintendent of schools at LaHarpe, Ill.

—Supt. J. C. Godbey of Plattsburg, Mo., has been reelected for another year.

—Mr. R. M. Pulliam has been elected superintendent of the elementary schools of Litchfield, Ill., for the next year.

—Mr. A. W. Shields has been elected superintendent of schools at Wellington, O., to succeed Mr. Kerr.

—Supt. G. D. Dieterich of Carrollton, Mo., has been unanimously reelected for another year.

—Supt. D. Walter Potts of East St. Louis, Ill., has been reelected for the next year.

—Mr. G. B. Farrell of Cedar Falls, Ia., has been elected superintendent of the consolidated school at Dysart, for the coming year.

—Mr. E. W. Powers has been appointed superintendent of schools at Fairbury, Ill.

—Mr. D. P. Hawkins of Pittsburgh, Pa., has been elected superintendent of schools at Astoria, Ill.

—Supt. R. R. Banner of Bramwell, W. Va., has been reelected for the ensuing year.

—Mr. Philip Griebel of Warrensburg, Mo., has been elected superintendent of schools at Spiro, Okla., to succeed J. E. Wales.

—Mr. Wm. T. Darling of Eau Claire, Wis., has been elected superintendent of schools at Wauwatosa.

—Mr. John N. Breer, assistant superintendent of schools at Minneapolis, Minn., has been appointed principal of the West High School, to succeed C. W. Boardman. Mr. Greer will also have the title of advisor in industrial education and will continue his present duties in directing industrial training in the schools.

PERSONAL NEWS OF SCHOOL OFFICIALS

BECOMES PROFESSIONAL ADVISOR

Mr. Paul F. Neverman of Marinette, Wis., on July first, becomes affiliated with the architectural firm of Parkinson & Dockendorff, of La Crosse. Mr. Neverman, who was formerly superintendent of city schools at Marinette, will act in the capacity of special advisor to the firm, in the planning of school equipments as well as in the checking of plans from an educational standpoint.

PERSONAL NEWS OF SCHOOL OFFICIALS

—Mr. A. R. Stewart has been elected secretary of the School board at Springfield, Mo., succeeding J. L. Likins.

—Mr. M. G. Davis of Brooklyn, Ia., has been elected superintendent of schools at Indianola.

—Mr. R. H. Brown of Dayton, Ky., has been elected superintendent of schools at Morristown, Tenn.

—Mr. H. E. Zuber of Oxford, O., has been eeclted

—Supt. Wm. J. Burrett of Hersey, Mich., has announced his resignation to take effect at the close of the year.

superintendent of the Bath Township Consolidated Schools near Yellow Springs.

—Mr. H. R. Gorrell, Principal of the high school at Massillon, Ohio., has been elected superintendent of schools to fill the unexpired term of the late L. E. York.

—Mr. Everett Veerman has been elected secretary of the school board at Pekin, Ill.

—Mr. James East has been elected clerk of the school board at Altoona, Kans.

—Mr. James L. Kautz has been elected chief clerk in the office of the business manager at Cincinnati, O. Mr. Kautz succeeds Mr. H. P. Becker who resigned to take a commercial position.

—Mr. Wilbert C. Wehn has been elected secretary of the school board at Johnstown, Pa., succeeding the late Charles H. Meyer. Mr. Wehn was formerly assistant to Mr. Meyer and has been with the school board for the past four years.

—Miss Lauretta Leedon has been elected secretary of the school board at Laurel, Ia.

—Mrs. H. H. Richmond is the first woman to be elected a member of the school board at Hannibal, Mo.

—Mr. F. A. Martin has resigned from the school board at Hamilton, Mo., after a service of more than 25 years. During his long service, Mr. Martin was especially active on the building committee and he gave many evening hours as well as much time from his private business to the work of the schools.

—Mr. Thomas Shallcross, for many years a member of the school board of Philadelphia, died at his home in that city on March 17th, after a brief illness. Mr. Shallcross who was a member of the board for 33 years, gave freely of his time and efforts in the interests of the schools. He attained the distinction of being its oldest member, both in age and years of service, and through his ripe experience in all school matters, rendered very valuable service to the Philadelphia school system.

—Mr. C. W. Handman, business manager of the Cincinnati, O., schools, has been reelected a member of the library board by the board of education. Mr. Handman has been a member for the past fourteen years.

—Mr. Paul E. Weber has been elected president of the school board at Hoopeston, Ill., succeeding Dr. L. B. Russell. Mr. Arthur Campbell has been elected secretary of the same body to succeed L. E. Alkire.

—At Quincy, Ill., Mr. J. C. Whitefield has been elected president of the school board, and Mr. Wilton White secretary.

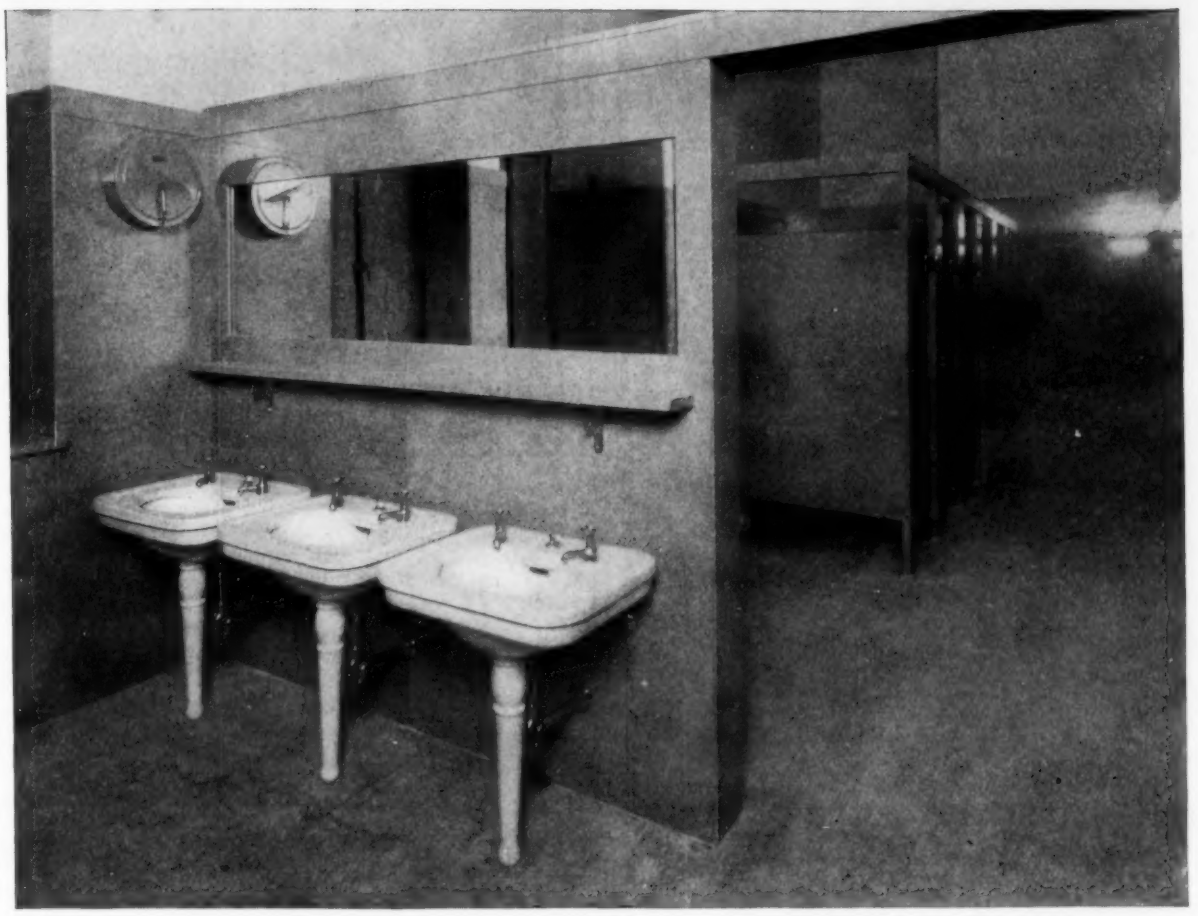
—Mrs. Clyde Roath has been elected clerk of the school board at Dallas City, Ill., succeeding Mrs. Shaw.

—Mr. Alfred W. Gray has resigned as a member of the school board at Niagara Falls, N. Y., after a service of eight years.

—Mr. E. F. Burch, business manager of the school board at Rock Island, Ill., has been reelected for another year. Mr. E. A. Sheldon has been reelected for another year as chief engineer of the school system.

—LaSalle, Ill. Mr. J. E. Coleman has been elected president of the school board, and Mr. Conrad Reinhard secretary.

—Mr. G. W. Allison has been elected president, and Mrs. Blanche Wells secretary, of the school board at Aledo, Ill.



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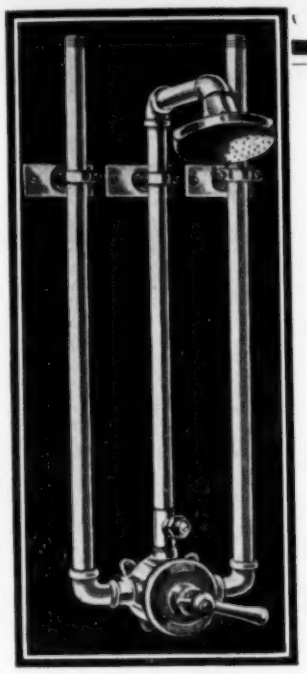

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DEMARCATION OF THE DUTIES OF THE BOARD OF EDUCATION, THE COMMITTEES, THE DISTRICT CLERK, AND THE CUSTODIAN[1]

John S. Mount, Inspector of Accounts,
Department of Public Instruction,
Trenton, N. J.

The legal status of a board of education is somewhat of the character of a commercial corporation, which is an artificial body, that can do only the things conferred on it by law and which are specified in its charter. A partnership on the other hand, is a group of two or more persons, under mutual agreement, and can do anything a natural person can do—that is, anything not forbidden by law.

The functions and powers of a board of education are limited just like those of a corporation, and its charter is the school law. Some have claimed that a board of education may do anything not forbidden by law, but that doctrine cannot be upheld.

What I have to say will apply largely to all school boards, but I have in mind particularly borough, town and township districts governed by Article VII of the New Jersey school law.

The law says, "Each board of education elected as provided in this article shall be a body corporate, and shall be known as and called the board of education of the school district of.....in the county of....." Therefore the group of nine, five, or three elected, highly honored men is a board of education **only** as it may be in a **regularly called session,** (note the word regularly) and the members thereof when not in session, are just citizens—nothing more or less—and have no more powers than any other citizens of that municipality who are not members of the board of education.

If a member of a board has no authority outside of board meetings, and as boards cannot sit in continuous session, how is the business of the school district to be carried on? Can the board delegate powers to committees, and if it can, how far can committees go in the legal transaction of business? These are very important questions, and because some boards have not known the correct answers, they had to appear in court at considerable expense to their districts to get them.

Section 120 of the New Jersey law defines the powers of a board of education in considerable detail. After Division III, there is a foot note—a quotation from a decision of a court case which should throw considerable light on our questions. I quote: "A board of education, in seeking proposals for a contract to supply school furniture may lawully delegate to a committee of its body the duty of preparing and submitting the specifications for such purpose, and of conducting negotiations for the contract; **provided,** the proposals and the results of the negotiations are first reported to and considered by the board before final action in awarding the contract."

It appears from the foregoing that a committee cannot be clothed with the power to make a contract; that the functions of a committee are to open up the way, so a contract **can** be entered into. There is much work of a valuable nature which a committee can do—better perhaps than a larger body can—which will assist in the efficient and intelligent functioning of the board.

Many a time have I read in the minutes of boards of education sentences something like this: "On motion of Mr. A, seconded by Mr. B, the teachers' committee be authorized to negotiate with Mr. C, for position of teacher **with power to act.**" This means that the committee was instructed to make a contract with Mr. C. In the light of the law, the above action was illegal. In some cases, however, the action of the committee is afterward confirmed, or the committee makes the deal, subject to a legal contract to be made by the board. This latter step, however, is not always taken, and there may never exist a legally made contract.

Another delegation of power, perhaps more frequent than the representative one just mentioned, is one assumed, if not by direct action of the board, by the supervising principal of a district, or a principal of a school in the alteration of the course or courses of study, and the selection of textbooks.

Section 124 (just referred to) reads as follows: "No principal or teacher shall be appointed, transferred or dismissed, nor the amount of his salary fixed; no school term shall be determined, nor shall any course of study be adopted or altered, nor textbooks be selected, except by a majority vote of the whole number of members of the board of education." Note that the law does not say "except by a majority vote of those present."

When a district clerk's attention is called to a direct violation of this law as indicated by his minutes, he will probably say, "What do the members of the board know about it? We depend on our principal to attend to these matters." Of course, a board must depend on the superintendent or principal for information and suggestion. His duty in these matters is to advise; the board only has the effective decisions.

Committees can earn their salaries if they choose to look into things, gather information, use their good offices in smoothing the way for new projects and better things in their school systems, investigate possible extravagances, etc., and thus through their fund of information transmitted to the board, enable the board to act wisely.

The only definite authority conferred by law on a committee is that in Section 88, governing Article VI (city school) districts where "repairs not exceeding the sum of $500 may be ordered by the committee of the board having charge of the repair of school property, without the previous order of the board, and without advertisement." This power was so flagrantly abused by one board of education in this state, that by special act of the legislature, all the members of that board were legislated out of office.

With this one exception, committees have no powers in law.

The district clerk bears quite a different relation to the board. He is a statutory officer, and his duties are distinctly defined. If the clerks would learn their duties and then religiously perform them, the boards would function more efficiently. The personnel of a board must necessarily change from time to time, and in some boards new members are elected each year. It can hardly be expected that a board

(Continued on Page 129)

[1]While this paper, read before the Mercer County School Board Association, Feb. 7, 1924, applies specifically to New Jersey, it contains so many facts and principles of general application that it may be read with benefit by any school board member.—The Editor.

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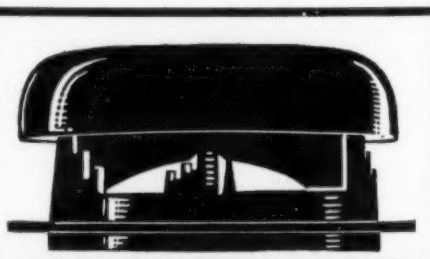

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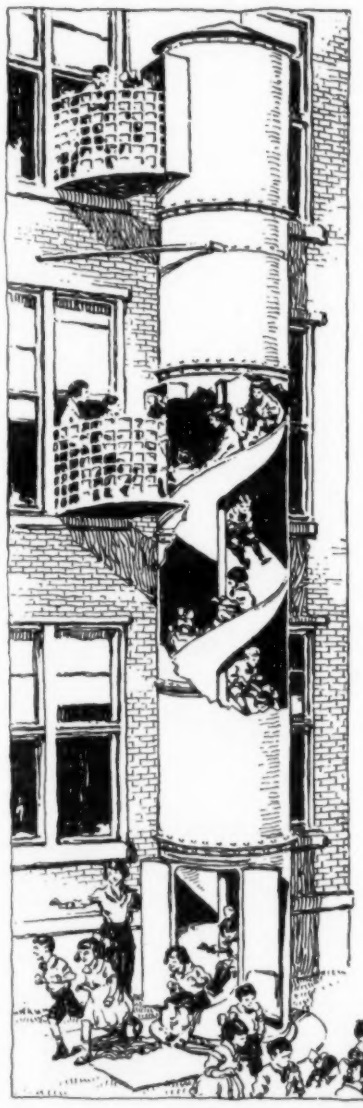

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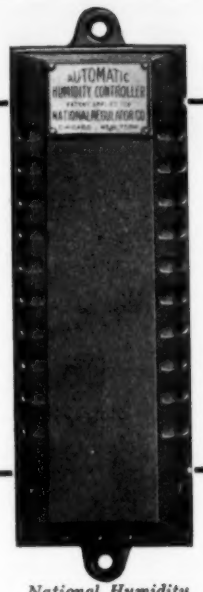
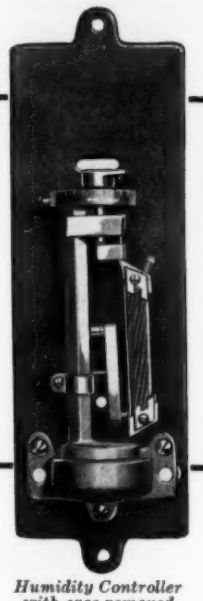


National Humidity Controller

The Automatic Humidity Control Apparatus of

The National System



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When you specify National Humidity Control Apparatus you select the product of a house known for two decades as the leading manufacturer of quality equipment—an important consideration.

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(Continued from Page 126)

member will know all the law especially at the beginning of his term of office, and while "ignorance is no excuse," I do sympathize with a new member in this respect. The district clerk, however, frequently retains his position from year to year, and this is as it should be, provided he is a good one. In order to be a good, efficient and capable official he must in the first place know "how," and to know how means a vast amount of study. Because of the changing membership of the board, he should be in a very large way the legal adviser of the board (the steering committee so to speak), to the extent at least of pointing out to the board the things it can or cannot legally do. He should keep his work up to date, and if he complies with the law, and the rules and regulations of the state board of education, in charge of the commissioner of education for enforcement through the business manager of the state department of public instruction, he will **have** to keep up his work. If he makes the proper monthly reports to the board, his work must be up to the date of the last regular meeting.

The clerk is the bookkeeper, the secretary of the board meetings, and has many duties to perform at specified times, his failure to do which may cause the board no end of trouble and cause considerable expense to the district. This is doubtless the reason the law says, "He shall before entering upon the duties of his office, execute and deliver to the said board a bond in a sum to be fixed by the said board." Since he handles little or no money many boards think it unnecessary to require a bond. You will agree with me that a bond is necessary if for no other reason than to safeguard the valuable records of the board. The very fact that one is bonded is likely to make the ordinary person a little more careful.

But the office of district clerk carries with it larger duties and greater responsibilities than those usually designated by the title of "clerk." If a board member has no authority, and a committee of the board has no authority, between meetings, who then must do the things necessary to be done in that interval? The district clerk must act. He is the representative of the board. It is he specifically on whom the law confers the power "to purchase supplies when authorized by the board." I cannot find in the law that such authority can legally be delegated to anyone else. In fact, all orders must pass through his hands, and be signed by him. He has important duties prescribed by law to perform without direction or authority of the board, such as the posting of notices of district meetings, failure to do so which subjects him to a fine of $20; to certify to the assessor and others the amount of tax to be raised to pay bonds and interest; to transmit bond issue proceedings to the attorney-general; and to make the monthly inspection and certification of school registers before a teacher can legally receive salary. He is a very important official, and the board should require of him the fullest performance of his duties. If he is efficient, the board should make the compensation commensurate with the office, both as to its importance and its dignity.

There are some other things not mentioned directly in the law which boards of education should do if they are to keep up with present-day educational demands. The constant increase in population, and demands for a broader and more diversified curriculum (requiring more classroom facilities) places a great responsibility upon boards of education. Building surveys are required in many instances, and these should be made in anticipation of future needs. They should not be delayed until a crisis is imminent because it takes time to provide school buildings. The situation must be carefully studied, the facts carefully and accurately enumerated, and then "sold" to the district. When that is done the money will be forthcoming to provide proper buildings and equipment.

Another important duty is the annual budget. The district clerk should prepare a tentative budget somewhat in advance of the time of its adoption. Each member of the board should have a copy of it, and then the work of the board members begins. The needs for the coming fiscal year should be carefully studied, the clerk's figures checked and, if the amount exceeds the average normal annual increase, this too should be carefully analyzed and "sold" to the district before the time of the annual district meeting.

I have endeavored to bring to your attention some of the points on which all board members perhaps are not fully posted. Unless you are sure of your ground my advice is to consult frequently your legal adviser—the county superintendent.

"LESSONING" TAXES

—Occasionally a newspaper editor has a sense of humor as well as a sense of justice and allows a communication from a disgruntled reader to carry its own reply as well as its original message. An illustration of an argument for rather than against improved education is contained in a letter published in the exact spelling and punctuation of a reader to the Beaufort, N. C., News:

OPPOSES COUNTY UNIT PLAN

Editor Beaufort newes,

I want to say something about this county unit they Say that it will lesson our tax but I think by that it will be like it was when the assessors sest our property they said it would lesson taxes by raising our valuation heigher they said that taxes could not exceed over 10 per ct higer than they were in 1918 but you see where they have gone So you can mark it all pals it is not so I have got enough of consoladation for my part if you will cut the School term down to 6 month to the year the children will lern more than they doe and also stop paying so many heigh price teachers and get clear of Mr. wright and hire a cheaper man and you can lowern tax rate this 8 month school is a course when I was a boy I went to school 3 month to the year and learnt more than they do now they study more foolishness than any thing else chainge book where they learn them or not thire is children in our School at newport that has chaings books three or four times and cant read the first book so if you will cut officers salries you can lesson tax rates not without I hope all the people of Carteret County will take a lesson from this and go to the poles like gentlemen and kill this unit plan I am against it your friend

E. L. M.

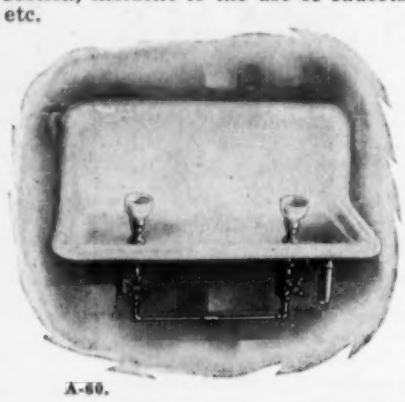
Newport, N. C.

Your first thought—

The Children's Safety

The sense of satisfaction on the part of the school authorities—the thought of having discharged the grave duty—that of protecting the lives of the innocent children—will be a source of great satisfaction.
When you install a "CENTURY" Bubbler Fountain you have the assurance of having made the children safe from germs or infection, incident to the use of faucets, cups, etc.

No. B-1.



A-60.

These fountains can be furnished in various styles. Style A-60 is of porcelain enameled construction equipped with style B-1 Bubbler head self closing N. P. stop cock and suitable for school, corridors, etc.
Style B.-1 is a Bubbler head that can be conveniently installed on any of our fountains. They are so constructed that the children's lips cannot touch the Bubbler head. This type we readily suggest or recommend for Schools and Public Buildings.

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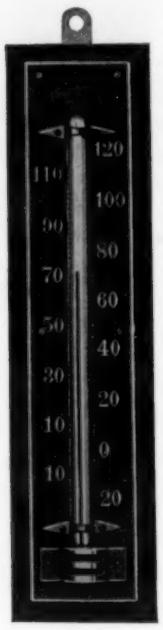

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ACCURATE thermometers the only kind that is given the "Wilder" mark—will tell when the point of healthful temperatures is reached. Schools everywhere are equipped with Wilder Thermometers, because careful testing in our factory, plus the test of practical use, has assured a product that can be relied upon.

Get a quotation on "Wilder" Thermometers from your jobber or direct from us.

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A FINANCIAL REPORT ON EXPENDITURES IN SCHOOLS

"A Financial Report to Citizens on Expenditures in Public Schools" is the title of a report presented to the school board of Miller, South Dakota, covering the school expenditures in South Dakota and the surrounding states. In preparing the report, the Strayer-Engelhardt accounting system was used as a means of arriving at itemized operating costs for comparative purposes. Blanks were sent to all schools using the system in the states of South Dakota, Minnesota, Iowa, Nebraska, Colorado, Wyoming, Montana, and North Dakota. There were thirty schools in all to which blanks were sent and replies were received from 22 schools.

In making the study and compiling the data for the report, it was necessary to make a separate distribution for cities with more than 1,000 average daily attendance and one for those with less than 1,000 a. d. a. The following conclusions should be noted:

1. Small schools pay about twice as much for "general control" as the large schools. This is almost entirely in the item of salaries of the superintendent's office. The smaller the system the larger the per capita cost per superintendent. The smaller community pays more money per a. d. a. for teachers' salaries, yet the salary schedule of the larger system is higher than the smaller school. This is due to the opportunity for efficiency in the larger system.
2. Supplies and textbooks are higher per capita in the small system.
3. The percentage of high school enrollment is seven per cent higher in the small system.
4. The total instructional service is $7 higher in the large system than in the small system.
5. Fuel is one and two-thirds times higher for the small school.
6. The large system has about sixty per cent higher debt service and capital outlay than the small system. This is generally caused by new buildings and equipment.
7. School systems paying more than 75 cents per capita for health service and nurse service receive in return about five per cent better attendance as calculated by the ratio of a. d. a. to total enrollment. Nine schools spent from $0.58 to $2.10 per a. d. a. for health service.

In making its recommendations to the board, the committee suggested that the following discrepancies receive attention:

1. Miller stands high in salary of superintendent. The city is the smallest in size and only one school pays more to its superintendent.
2. The principal's salary is high.
3. The salaries of teachers are almost $5.50 per a. d. a. less than the average in cities of less than 1,000 a. d. a. Miller salaries should average $121 more each year, per teacher, before the average of nine cities with less than 1,000 a. d. a. can be reached. The salaries are a little higher than in schools with more than 1,000 a. d. a.
4. Miller stands low on supplies used for instruction.
5. The organization of building maintenance whereby not as much janitor service as usual is employed in the schools has made quite a saving on this item of janitor service. The fuel average is also low. The low averages are attributed to the use of every square inch of building.
6. The light bill is high but the janitor supply bill is low.
7. The maintenance of plant form is also low.
8. The $2.28 for insurance which is somewhat higher than most averages is accounted for by the fact that it is the only insurance paid in the last five years. To get the real cost per year this figure should be divided by five.
9. The debt service stands fairly high, while the capital outlay is extremely low. The latter has been low for the last five years but it should not remain so much longer.
10. Miller stands high in pupil transportation. Only three schools on the entire list had any transportation charges, so that ony one of the three would be much higher than the average.
11. The percentage of attendance is higher than the average and is as high as in those schools paying for nurse service.
12. We have a high proportion of high school for students.
13. The total school expense in Miller is $13 less than that of large cities and $19 less than that of small cities.
14. Excluding "capital outlay" and "debt service" from the total expense, Miller ranks twelfth in the group of 22 schools. It also ranks seventh in the nine schools of less than 1,000 a. d. a.
15. Excluding "capital outlay" and "debt service" from the budget, Miller's total still stands at $12 less than the average of its group of cities and only $5 more than the larger school average.

It is believed that Miller should direct her attention to the problem as to what returns are being received from the money paid out, particularly in the matter of teachers' salaries. The question centers around the point as to whether an increased salary budget will increase teaching efficiency to a greater extent than is at present the case with a lower salary schedule.

BUILDING AND FINANCE

—Windber, Pennsylvania, in Somerset County, is building a new school at a cost of about $150,000. The board is short about $20,000 in the required funds. At a recent school board meeting, after discussing what could be done to get the required money, one of the board members suggested that instead of omitting the gymnasium at a saving of about $9,000 they try to raise this amount of money by popular subscription. The various members immediately contributed the sum of $1,000 to start this subscription list, and the citizens of Windber will be asked to make up the remainder.

—Seattle, Wash. The ninth high school in Seattle will be opened in September. The high school enrollment is now 12,340, or 23 per cent of the entire enrollment of the public school system.

—Hartford. The Brown school district has a grand list of nearly $90,000,000 which is regarded as one of the richest in Connecticut. It embraces the principal business district of this city, insurance companies and heavily stocked department stores.

—Rockville, Conn. Every modern convenience will be found in the new George Sykes Memorial school now under construction in this city. H. O. Clough, superintendent of schools, and Philip M. Howe, principal of the Rockville high school, have gone on an inspection tour of schools in New York City and New Jersey.

Need of School Building Programs

"The need for a building program becomes evident only as cities grow. Growth and development in all cities is not identical. Growth of in-

(Continued on Page 132)

The choice of steel lockers is a matter for due deliberation and should not be settled hurriedly at the last minute.

The more carefully you compare lockers, the more certain you are to decide finally upon Durand Steel Lockers. There are many points of superiority which a Durand representative can best explain to you.

Durand Steel Lockers are made in various types. It is worth while to learn their advantages. If you have not our Catalogue M, write us.

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The Standard of Comparison
COMPARE Cyclone "Galv-After" Chain Link Fence Fabric with any other chain link fabric. There is a big difference.
Cyclone is the *perfect* "Galv-After" Chain Link Fence Fabric, Heavily Zinc-Coated (or Hot-Galvanized) by Hot-Dipping Process AFTER Weaving. No frozen or soldered links. No lumps. A beautiful, uniform zinc coating.
Cyclone is the standard by which fence durability and fence serviceability are measured.
Write nearest offices for complete information on this better chain link fence for school grounds and Cyclone Service which solves any fencing problem. We also manufacture Iron Fence and Gates particularly suited to school property. Address Dept. 31.
CYCLONE FENCE COMPANY
Factories and Offices:
Waukegan, Ill., Cleveland, Ohio, Newark, N. J., Fort Worth, Texas, Oakland, Calif. (Standard Fence Co.), Portland, Ore. (Northwest Fence & Wire Works)
CYCLONE
"Galv-After" Chain Link
FENCE FABRIC
PROPERTY PROTECTION PAYS
The Mark of Quality Fence and Service
Cyclone "Red Tag" FENCE AND PRODUCTS

This blast wheel is an extraordinary demonstration for the strength of Plexiform construction and bears out the claim of Bayley engineers—proven many times by less severe tests—that Plexiform construction has the maximum of structural strength, though comparatively light in weight.

STRENGTH

This wheel was crushed under tons of derbis when a four-story buidling collapsed upon it.

Not a rivet was broken, not a joint loosened, nor a fracture in any part.

Strength of materials is sometimes proven by unusual tests, by strains out of all proportion to those experienced in actual use.

21

Bayley

Manufacturing Company
746 Greenbush Street
MILWAUKEE

For Your School

The most perfect, continuous ventilation—

With absolute elimination of trouble, and—

At the least expense—

"GLOBE" VENTILATORS

Our Catalogue tells you WHY the above statements are so. Write for it before installing ANY ventilating system.

Address Department J.

GLOBE VENTILATOR COMPANY, TROY, N. Y.

(Continued from Page 130)

dividual cities can be predicted with a reasonable degree of reliability as has been shown by many of our public service corporations."

So writes Superintendent W. W. Borden of South Bend, Indiana, in his annual report. He continues: "One of the mistakes made in many cities is that of erecting many small buildings to care for immedate needs. Small buildings dotted over a city mean greater expense in upkeep as well as initial cost and also mean fewer modern facilities for the children. The larger school with more children means that the community can give to the children a much better and enriched program. For example a school of 1,000 to 1,200 pupils can afford such facilities as auditorium, shops, gymnasium, library facilities which are out of the question in smaller units.

"Another error in many cities has been to erect buildings before it is clear in just what direction the population is tending to concentrate. In such cases it is wisest to erect temporary buildings to care for the problem until it is clear where the new building should be located.

"The board of education here has made a careful study of the condition by means of a survey. This survey consisted of a study of the trends of population, record of births, building permits, vacant lots, location of industrial centers, business centers, apartment houses and other things that would affect population trends. All this was done that school buildings could be located properly and on sites large enough to provide for the physical education of the child.

New York School Building Program Rushed

Statistics of school building construction in New York City since January 1, 1918, reveal facts about the size of the school building program which has been under way, and the present status of the school construction work.

For the period between January, 1918, and March, 1924, the building department of the schools completed and opened 93 elementary school buildings and five high schools costing more than $40,000,000 and provided a seating capacity of 87,130.

There were under construction on March 13, 1924, new school buildings and additions which when completed will provide 118,899 new sittings at a total cost estimated at $72,660,763. Since March, 1924, contracts for a number of other buildings have been awarded bringing the total up to approximately 150,000 sittings.

Of the 82,348 elementary sittings in buildings opened between January, 1918, and March, 1924, 41,354 were in Brooklyn, 19,125 in the Bronx, 11,825 in Queens, 8,366 in Manhattan, and 1,678 in Richmond Borough.

The high school sittings opened included 2,200 in Brooklyn, 1,966 in Queens, and 616 in Richmond Borough.

On March 13th last, there were under construction 113,899 new sittings, of which 92,858 were elementary and 26,041 were high school. Of the total, 43,445 are in Bronx Borough.

Next in line for relief are the schools of the Bronx, for which 31,729 new sittings are being provided, or 28,341 for elementary and 3,388 for high school.

The total cost of the building program is estimated at $72,660,763, divided between the elementary and high schools of five boroughs.

A HUGE SCHOOL BOND ISSUE

A school bond issue of $34,634,000 is to be voted at Los Angeles, California, in June. The issue is unanimously endorsed by the citizen's committee. The following explanation accompanies the bond issue campaign:

Buildings—One hundred and ten new buildings, ranging from eight to thirty rooms. Twenty-five of these buildings will be on new sites. Thirty-two additions to old buildings, ranging from one to twelve rooms.

Land—Additional ground for 124 existing schools. Forty new sites, twenty-five of which will have new buildings, as indicated above. The other new sites will be furnished with bungalows, as they are in suburban districts not so densely populated.

Out of high school funds:

Buildings—Ten additional buildings to the junior high schools (two-thirds of the cost of which is for elementary children, although financed out of high school funds). Nine new junior high schools. Seventeen additions to senior high schools and eight new senior high schools. Out of the present bond money two junior high school sites and one senior high school site have been purchased, for which the new bond issue must provide the buildings.

Land—Additional ground for seven existing junior high schools and seven new sites. Additional ground for seven existing senior high schools and seven new senior high school sites. (These are required by the excessive size of the high school district and the rapid growth of the new centers of population.)

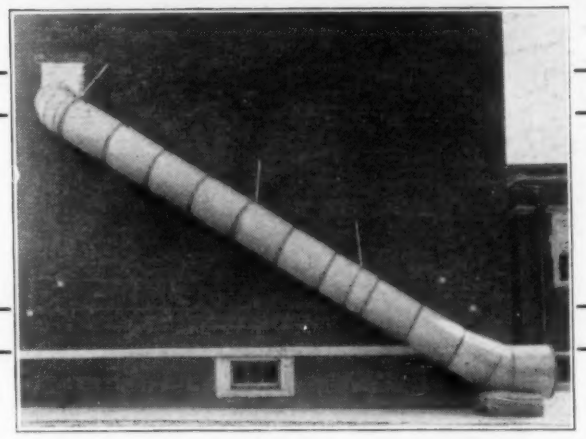
Economies: The building program in Los Angeles has been carried on with a view to the utmost economy. All auditoriums in elementary school buildings are constructed so that they are used during the day for schoolrooms. We are building no gymnasiums in elementary schools. In other parts of the country both auditoriums and gymnasiums are constructed. With us, the physical training in the elementary schools is very largely carried on outside of school buildings. All buildings are designed so that additions may be made without tearing the original building to pieces. We have destroyed thus far only two small buildings, which buildings were in such condition that they could not be moved for further use.

Classes are now being held in approximately 600 temporary locations, many of which are very inadequate and insanitary, viz.: tents, bungalows, churches, store buildings, shacks, poorly ventilated and meagerly lighted basements, hallways and cloakrooms. Other classes are being held out of doors, on roofs, etc., when the weather permits, and in hallways in inclement weather.

—Karl F. Adams, superintendent of the Santa Cruz, California, schools, is pointed out by Irmagarde Richards, a writer, as a new type of educational leader. "Few superintendents have succeeded in selling their school programs to the body of citizens so effectively," is the claim made for him.

—Richard E. Tope, superintendent of schools in Grand Junction, Colo., for the past thirteen years was recently given a new contract for another three-year period, at an increase in salary. Mr. Tope was honored at the district conference of Rotary clubs, held in Colorado Springs April 8 and 9th, by being elected governor of the seventh district of International Rotary comprising the states Colorado, Wyoming, part of Nebraska, and part of New Mexico.

For *Safety* Install
THE POTTER TUBULAR FIRE ESCAPE



At a moderate cost you can equip your schools with Potter Tubular Fire Escapes. For maximum safety and capacity, the Potter Tubular Fire Escape is particularly adaptable to schools because smoke, water or flames will not interfere with its use. Especially in winter when fire hazards are greatest you will not be worried with ice.

Besides being neat appearing the Potter Tubular Fire Escape is built of materials that will give many years of service.

We will gladly send you literature describing what FIRE PREVENTION EXPERTS consider the best fire escape known for safeguarding the lives of school children. There is no obligation on your part to make purchase.

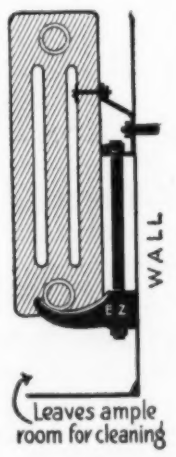
Hundreds of these escapes now in use.
Write for list of installations near you.

POTTER MANUFACTURING CORP.
General Office
1862 Conway Bldg., Chicago, Ill.

E-Z RADIATOR HANGER
YOU'LL USE 'EM YET!

Cuts Cleaning Costs-
Improves Sanitation!

Instead of letting the radiator rest on legs close to the floor, E-Z Hangers support the radiator from the wall, off the floor. This permits legless radiators and leaves ample room for fast, thorough cleaning underneath with vacuum cleaner or brush.



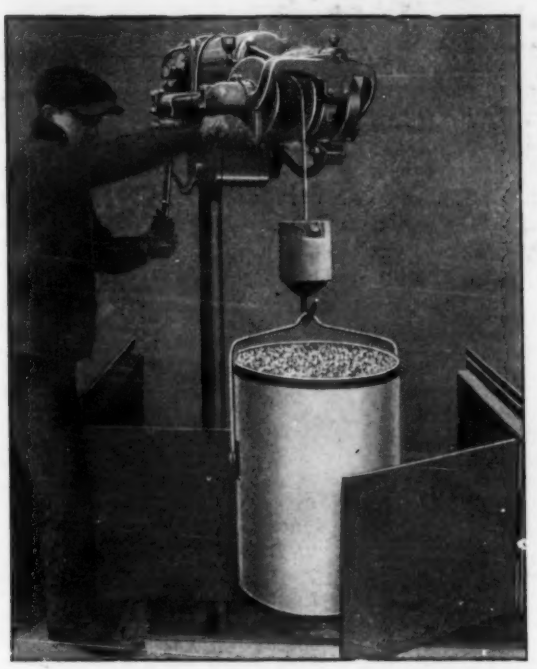
The results: Cleaning speeded up and made more thorough. Sanitation improved. Dirty spots from hot radiator legs eliminated. Trim, attractive radiators.

E-Z Hangers are fully hidden when installed. They are adapted to **any** wall, **any** radiator. Inexpensive and used in practically all new schools.

See your architect, or write for full information.

HEALY-RUFF CO.
557 Plymouth Bldg. Minneapolis, Minn.

G&G



Model E Electric Hoist in use at P. S. No. 73 Borough of Brooklyn, New York City. C. B. J. Snyder, Archt.

The Hoisting Power of One Cent

ONE cent's worth of electric current raised and lowered 33 ash cans at P. S. No. 73, one of the 72 New York City schools equipped with G&G Hoists. This record was established by an official test to determine the economical operation of the G&G Model E Electric Hoist above illustrated.

Such results are not exceptional. Of course, the distance of lift and cost of current are essential factors—but similar tests have shown as high as 45 cans handled for one cent.

Economy is one important reason why 956 public schools in 40 states are using G&G ash removal equipment. Another important reason is the high degree of safety attainable with G&G equipment. The sidewalk opening is safeguarded at all times, a very necessary consideration when school children must pass near the sidewalk opening.

May we send you our catalog? If you prefer, you can ask your architect about G&G equipment. He has our catalog on file, and is familiar with the subject.

GILLIS & GEOGHEGAN
551 West Broadway New York

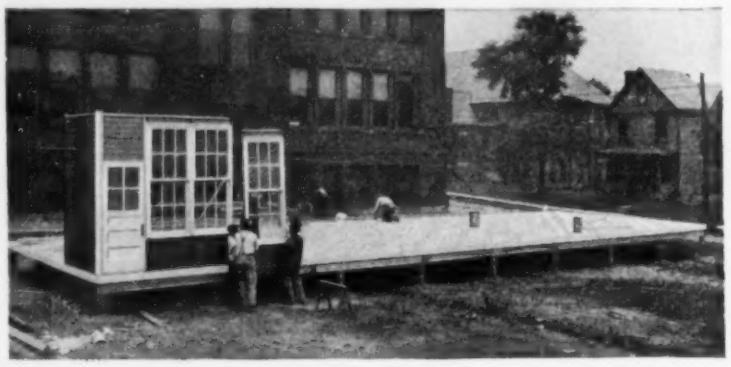
The G&G ELECTRIC REG. U.S. PAT. OFF
Telescopic Hoist
With Automatic Stop and Gravity Lowering Device

G&G G&G

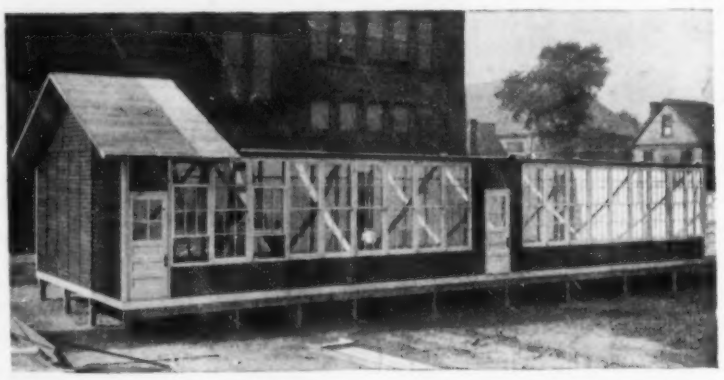
Erecting a Two-Room School in Eight Days

A one-room Circle A School can be erected by a carpenter and three laborers in five days; a two-room school in eight days. Each room accommodates forty pupils comfortably.

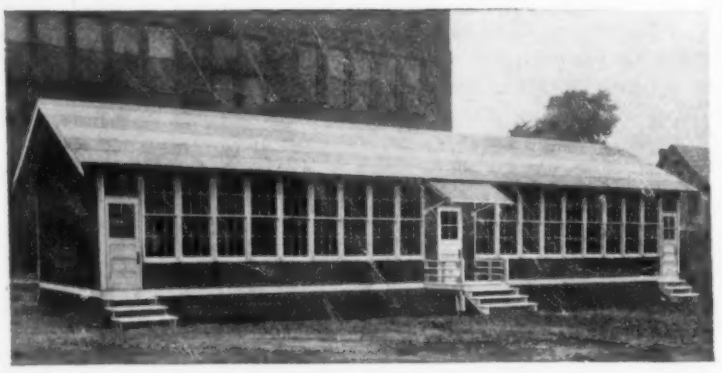
Circle A Schools come in completed sections, three feet wide by wall height, each section being completely finished, with plaster board, interior trim, baseboard, and stained and painted inside and out. Windows come already mounted, and doors already hung, with all hardware and window glass in place.



After the flooring is laid not a nail is needed except those used to attach the roofing material. Sections are bolted together through their studding.



Roof sections are in three-foot widths similar to wall sections. Roof trusses are ironed and bolted together so as to be actually stronger than most roof construction.



Circle A Schools are handsome enough to grace any campus, and are frequently superior in lighting and ventilation to rooms in older buildings. Their insulation (dead air space in sections) keeps them warm in winter and cool in summer.

Send for fully illustrated new catalogue of Circle A Schools, explaining construction features and method of erection, etc.

CIRCLE A PRODUCTS CORPORATION

A Subsidiary of the Alexander Lumber Company

614 Neil Street Champaign, Illinois

CIRCLE A SCHOOLS

(Sectional and Removable)

Made by the Makers of Circle A Portable Bleachers

Wilson

Providing New Rooms When Needed

TO meet the demand for changes due to increased enrollment—new rooms for new classes—larger rooms for larger classes—Wilson Sectionfold Partitions are suitable. They make it possible to turn one room into many, or many into one. Easy to install and operate. Adaptable to old buildings as well as new. Provide additional blackboard surface.

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Established 1876 Wilson DOORS · PARTITIONS · BLINDS WARDROBES THE J.G. WILSON CORPORATION NEW YORK CITY

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Save Time and Confusion in School with

Federal Standard

School Telephone Systems

THIS Company brings the experience of 23 years in the manufacture of Telephone apparatus to the special problems of installing School Telephone systems. The lasting efficiency of Federal Standard telephone systems is known the world over.

Samples and Complete Quotations to meet your requirements will be submitted on request.

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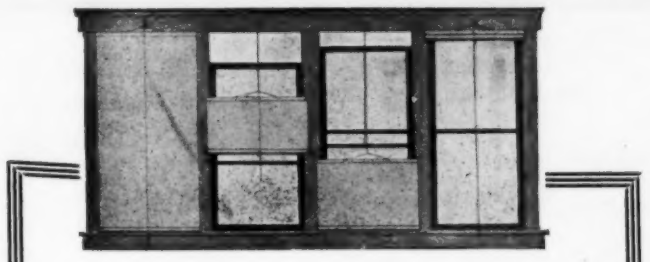
Buffalo, New York.



Draper Adjustable Window Shades

SIMPLE TO OPERATE

POSITIVE IN ACTION

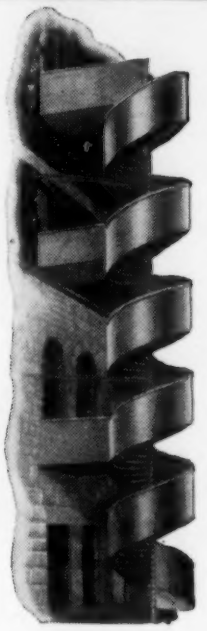
Draper Adjustable Window Shades, the result of over 20 years of effort in the manufacture of window shades for schools, represent the highest development in window shade construction. They embody every worthwhile feature essential to insure satisfactory operation and service.

Made of specially selected materials, Draper Adjustable Window Shades are sturdily and durably built—and in operation are the most practical and efficient adjustable window shades made. Any child can operate a Draper Shade without the slightest difficulty.

Descriptive literature on request.

LUTHER O. DRAPER SHADE CO.
Spiceland, Indiana

Draper Adjustable Window Shades Meet Every School Requirement



Speed—
with Safety

When fire threatens, a school building must be emptied speedily. It must be a safe speed because a panic is often as serious as fire.

Standard Spiral Fire Escapes give children a safe, swift route to safety. Youngsters do not hesitate to use them—emptying the school in a few seconds — or a few minutes at the most.

Decide now to have your school modernized this summer, so that when the youngsters return in the fall, you and their parents will know that these young lives are protected.

To learn more about Standard Spiral Fire Escapes, write for Booklet A-6.

STANDARD CONVEYOR COMPANY

General Office and Plant, North Saint Paul, Minnesota
Manufacturers of "Brown-Portable" Products
Representatives in All Principal Cities

THE 13th ANNUAL CONVENTION OF SCHOOL BUSINESS OFFICIALS.

(Continued from Page 51)

The final paper of the day was read for Mr. Frederick F. Martin, secretary of the board of education at Pasadena, California. Mr. Martin advocated co-insurance, the grouping of buildings for blanket policies, and careful appraisals of buildings. He described in detail the successful plan adopted by Pasadena, which is somewhat of a departure.

In the discussion which followed, it became evident that there is the greatest variety of practice among school boards in placing insurance. Mr. John Decker of Johnstown described the scheme of mutual state insurance which is being developed in Pennsylvania. Mr. R. M. Milligan told of the successful self-insurance which the city of St. Louis is carrying on its school buildings. Mr. John Cassel described the very simple plan by which Philadelphia has raised a fund of $1,625,000 as a reserve for possible fire losses. The experience of North Dakota where state control fire insurance for school buildings has been a complete failure, was presented by Mr. F. F. Burchard. Other experiences were suggestive and valuable.

The general opinion was that some type of protection is essential for school buildings, although these are among the best types of fire risks. School authorities who do not have adequate insurance are certain to be subject to sharp and warranted criticism if their insurance is not adequate.

The adaptation of rooms and equipment for industrial arts was presented in a notable paper by Mr. S. A. Challman of St. Paul, Minnesota. Mr. Challman followed along the lines of the paper which was published in the "School Board Journal" for January, 1924. It was made clear to the secretaries of school boards that the planning of shops for manual training involves many problems of organization of courses and expert teaching methods, and that the advice of teachers and supervisors in charge is essential for the development of satisfactory equipments.

The final paper of the afternoon was read by Mr. C. M. Schenck, treasurer of the Denver school district, on the "Relation of the School Board to the Local Municipality in Financial Affairs. Mr. Schenck made a convincing argument for the independence of school boards.

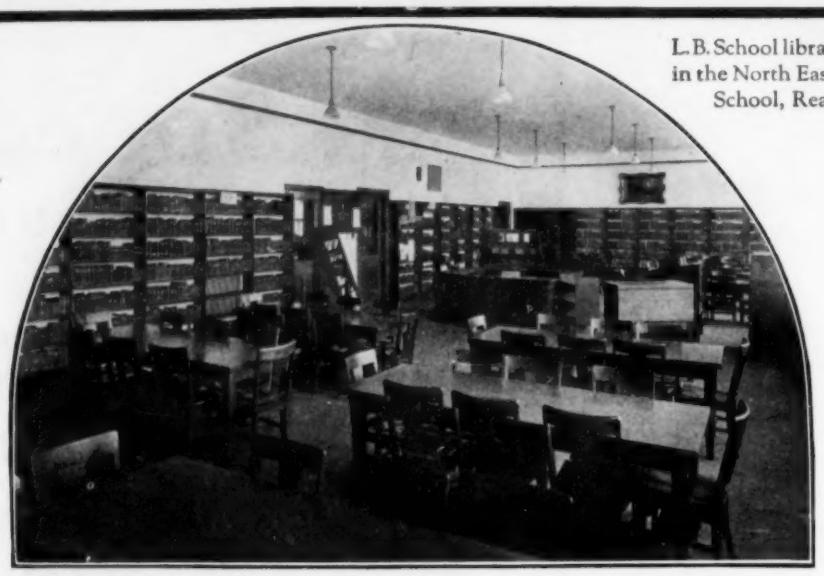
The Final Session

Mr. Mark M. Thomsen, formerly president of the Cleveland board of education, made a stirring address on Thursday morning on "The Desirability of Home Made Surveys of the Business Department of Public Schools." Basing his remarks entirely on the experience of Cleveland, Mr. Thomsen declared that surveys are desirable as a means of arousing school authorities to conduct the business of the schools with the greatest possible efficiency and of getting an intelligent understanding of school conditions among the intelligent portion of the community. The schools are the greatest tax-spending branch of the local administration of any community. When the schools as in Cleveland spend from $14,000,000 to $18,000,000 annually for new building construction and are constantly asking for more money, it is inevitable that criticism will come from people who lack information on conditions. In general, the purposes of a survey are: First, to overcome any abuse which may have crept into the administration of the schools; second, to give public officials who may have fallen into a rut in the course of years of service, an opportunity to get a better perspective of their work and of their department and thus adjust themselves to new conditions and to new and more efficient methods; a third purpose is to educate the public to a proper appreciation of the policies of the school department and to give them an understanding of the necessity for the work of the department.

While local volunteer surveyors of a school system may lack professional training, they have the advantage in understanding the background of school laws, local conditions, and the local temper of the people. This proved to be the case in Cleveland where a former survey had been a practical failure because the surveyors did not understand conditions and, therefore, did not gain the confidence of the community and the acceptance of their recommendations. Space will hardly permit a repetition here of the interesting description which Mr. Thomsen gave of the remarkable self-survey carried on in Cleveland, in which local builders, bankers, professional men, and businessmen to the number of nearly 75 gave generously of their time and ability and produced a report which has greatly influenced the business administration of the schools. The survey did not find any dishonesty and in fact did not anticipate any irregularity of any kind. It found, however, much to be improved and recommended many simplifications, and improvements. In the opinion of Mr. Thomsen, the schools are the one great insurance which we have for the future stability of the nation. They are an important cog in the machine of public administration, and they must be kept at the highest point of efficiency and must continue to command the respect and confidence of the intelligent public. A self-survey can do much to produce these two end results.

The Entertainment

The National Association of School Accounting Officials is a business organization. Its members attend meetings and conferences conscientiously, and the entertainment they permit is limited to a tour of inspection of the convention city and the annual banquet. The entertainment at Indianapolis was provided almost entirely through the courtesy and thoughtfulness of Mr. Richard O. Johnson, business manager of the schools. The ladies who attended the convention were entertained at a luncheon and theater party. The male contingent as well as the ladies, enjoyed a banquet on Wednesday evening at which Mr. Johnson presided with grace as toastmaster. The address of the evening was a thoughtful discussion of the growth and broadening of American education by Dr. Robert J. Aley of Butler University. An unexpected treat was a brief address by Senator Albert J. Beveridge, who declared that he rejoiced in the great growth of the schools during recent years. The Niagara of graduates who are pouring from the edge of our present-day school systems is enormous, and it is of tremendous importance that the quality shall be as high as the quantity. The spiritual element must be prominent in all education and quality rather than quantity must be the real gauge of success. When some results of present day education are contemplated, a doubt



L. B. School library equipment in the North East Junior High School, Reading, Pa.

To N. E. A. Convention Delegates

Be sure to visit the Library Bureau booths (booths No. 124 and 126) at the N. E. A. Convention in Washington.

There you will find a full line of school library supplies and also photographs and plans showing up to date school libraries which have been planned and equipped by Library Bureau.

Our representatives will be ready with practical suggestions to help you solve your school library problems just as L. B. service and products have solved library problems for hundreds of schools.

If you will not be present at the Convention, write to the nearest library department listed below, for a free copy of book No. 814, "School Libraries".

Standard L.B. school library equipment in quartered oak

Card catalog cases
Charging desks
Reading tables and chairs
Unit wood book-shelving, wall and double-faced
Periodical racks
Dictionary stands
Atlas cases
Display cases for books
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Vertical units for pamphlets, clippings and picture files
Book trucks
Exhibition cases
Bulletin boards
Lantern slide cases

School library supplies

Administrative school records and files for superintendents, principals, department heads, secretaries, etc.

Write for catalogs and information

Library furniture and supplies

Library Bureau

Steel bookstack Museum cases

Boston 89 Federal St. · Chicago 214 W. Monroe St. · New York 380 Broadway · San Francisco McKee and Wentworth 39 Second St. · Los Angeles McKee & Wentworth 440 Pacific Electric Bldg.

Salesrooms in leading cities in the United States, Great Britain and France

must arise as to whether the ease with which education is given the youth of today, results in general or specific good.

Many members availed themselves of the opportunity of visiting the newest Indianapolis school buildings, particularly the wonderful plant of the Arsenal Technical High Schools and the splendid new building of the Indianapolis Open-Air School.

The Round Tables

The meeting resolved itself into a round-table Tuesday and Thursday evenings. At the former, problems relating to accounting and the purchase and distribution of textbooks were discussed under the leadership of Mr. Samuel Gaiser. On Thursday, problems of building construction were handled by Mr. J. S. Mullan, secretary of the board of education at Rochester, N. Y. Both round tables produced an exchange of experiences such as can be found in no other organization. On Thursday evening, problems of heating and ventilation, flooring, roofing, swimming pool operation, stair construction, were commented on by men from various sections of the country.

The Business Session

The Association adopted resolutions: (1) Thanking Indianapolis and Mr. R. O. Johnson for their hospitality and entertainment; (2) thanking the officers of the Association for their efficient work during the year and the splendid program which they presented; (3) endorsing the appointment of Mr. James J. Mahar of Boston on the National Committee for the Revision of the School Lighting Code; (4) expressing regret at the death of Mr. Charles P. Mason of St. Louis; (5) recommending the appointment of a committee of five to promote state legislation for uniform accounting; (6) advocating a campaign for enlarged membership, and appropriating $250 for circular letters and $250 as a salary for the secretary; (7) declaring the policy of the Association on the relations of the superintendent and the secretary; (8) requesting the United States Bureau of Education to formulate a handbook on school accounting and to disseminate the same among school business officials. The resolutions on the relation of the secretary to the superintendent read as follows:

"We declare the policy of this Association to be, with relation to the superintendent of schools, to foster and uphold the ideal of mutual respect and cooperation and loyal service to one another; that such an attitude best promotes and conserves the interests of an efficient and economical administration of the public schools; that this spirit of mutual cooperation for efficient service can best be exemplified by each department following the impartial dictates of scientific thought and investigation; that on this basis all may understand and render the highest and best service to the board of education, to the children and to the taxpayers."

The following officers were elected by unanimous vote:

President, Mr. R. M. Milligan, architect of the board of education, St. Louis, Mo.

Vice-President, Mr. Clyde Blanchard, business manager of the board of education, Berkeley, Calif.

Secretary, Mr. John S. Mount, inspector of accounts, Trenton, N. J.

Treasurer, Mr. G. W. Grill, clerk-treasurer, board of education, Lakewood, Ohio.

ADMINISTRATION NOTES

—A recent decision of State Commissioner Walter E. Ranger of Providence, R. I., is to the effect that transportation must be provided for children living more than a mile and a half from a school building. The ruling is declared to be far-reaching both as to the number of pupils affected and as to the amount of money involved in meeting the condition.

—The school board of Lynn, Mass., has adopted the recommendations of a special committee providing for the elimination of fads and frills and for a reorganization of the English High School upon an efficiency basis. Classes which have less than twenty, fifteen or twelve pupils will be discontinued. No new classes will be formed with less than an enrollment of fifteen pupils. No changes in courses or subjects will be permitted after a period of three weeks, except by special permission of the superintendent.

—Chicago, Ill. Five new playgrounds with accommodations for 10,000 childrer will be opened at an estimated cost of $60,000. All of the playgrounds are in foreign or negro districts and are intended to keep children off the streets and away from bad environment. With the addition of these grounds, the total number operated by the school board has reached sixty.

—New Bedford, Mass. A new ruling of the school board provides that school buildings shall be named for the street or district in which they are located. The ruling was made following agitation over the renaming of a school building.

—Newark, N. J. As a result of a recent survey of the schools, it is estimated there are 4,212 retarded pupils in high schools. Supt. David Corson places the blame for the retardations on the all-year schools which have in many cases sent the pupils into high school inadequately prepared for advanced work. The report shows that there are 1,194 retarded pupils in the Barringer high school, of whom more than one-fourth are from all-year schools. In the East high school, there are 812 retarded pupils, of whom 314 are all-year school graduates. In the Central High School there are 1,513 retarded pupils, of whom 615 are from all-year schools.

—Akron, O. Under a new rule adopted by the school board, no pupil may be subjected to corporal punishment, except by or in the presence of the principal. A motion to eliminate this form of punishment was defeated.

—Butte, Mont. Beginning in the fall, the high school will be conducted on the one-session plan. Classes will open at 8:30 each morning, with a 25-minute recess for lunch at 11:30. At 11:55 classes will be resumed and school will close at 2:10.

—Bryan, Tex. The teaching staff has begun work on the differentiation of the curriculum for the benefit of children of varying abilities. It is proposed to provide an enriched curriculum for bright pupils and to offer the minimum essentials of a course for slow pupils.

—Washington, Pa. The contract has been let for the erection of a sixteen-room grade school to cost $144,000. The building was planned and is to be erected under the supervision of architect F. M. Crooks of Pittsburgh. It will be completed ready for occupancy next fall.

—Harrisburg, Pa. Construction work has been begun on the new William Penn High School to be erected in Hoffman's Woods.

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ALL schools find innumerable uses for the new, improved Model No. 5 Underwood Revolving Duplicator. Commercial schools use it to reproduce strong sales letters with facsimile signatures to prospective students. For public schools it prints class magazines, maps or illustrations, bulletins, tests, programs, music, and postcard invitations to school entertainments, doing the work rapidly, neatly, **inexpensively.**

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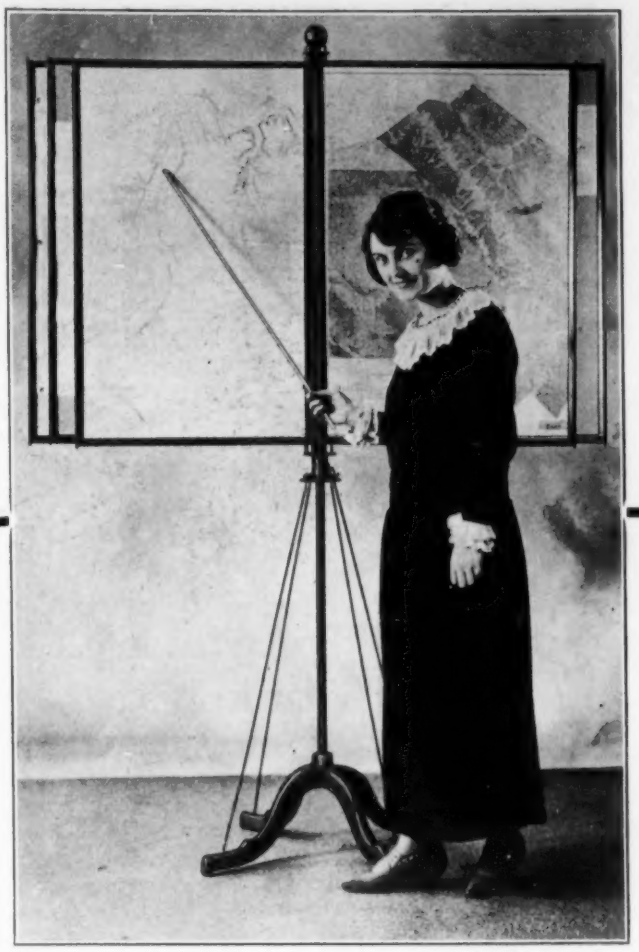

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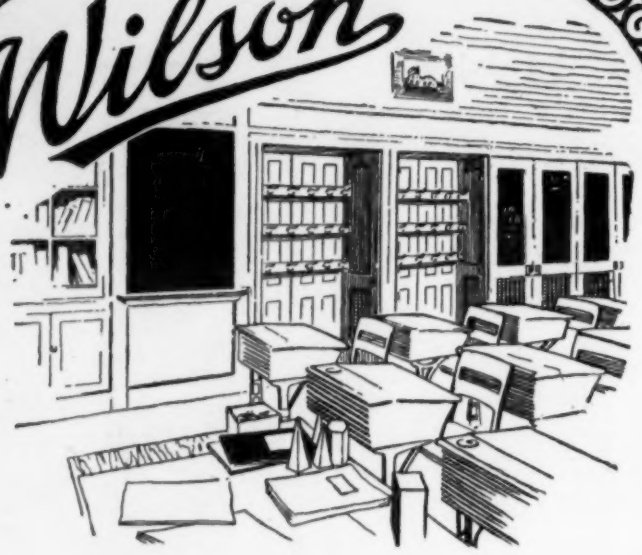

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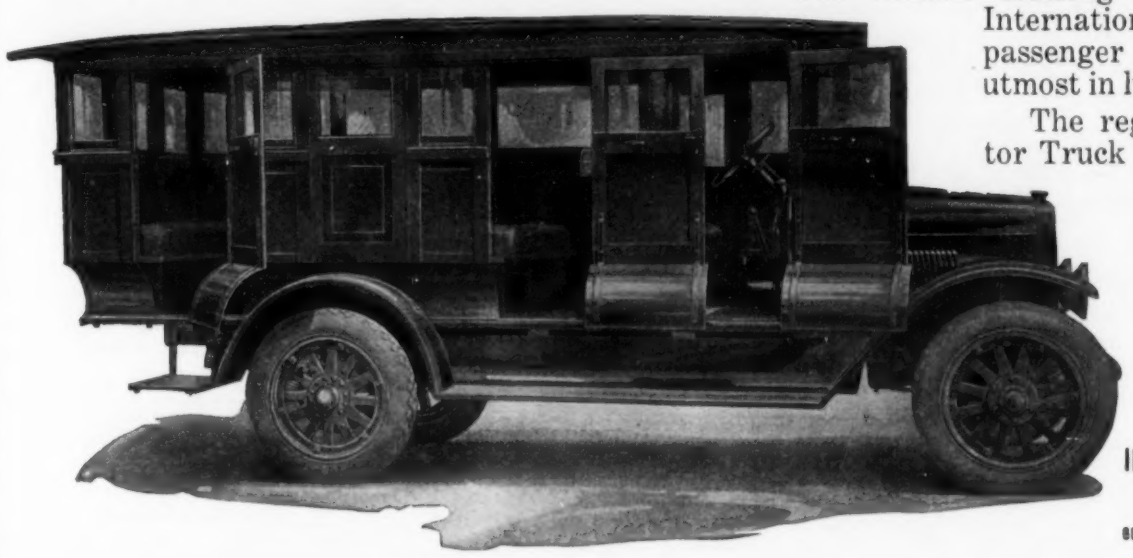

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FOR BUSY SUPERINTENDENTS

—Supt. James C. Bay of Easton, Pa., recently submitted to his board an interesting report on the subject of age-grade adjustment in the schools. He presented tables showing age-grade adjustments in the several school districts of Pennsylvania and called attention to improvements possible in the system. In addition, he presented the results of an age-grade progress study of the Easton schools. From this table it was possible to show the annual loss through re-teaching of pupils in the schools, this loss amounting to about $22,000. Supt. Bay pointed out that through efficient supervision, a considerable saving might be effected by reducing the cost of re-teaching.

—Superintendent G. L. Hardin of Mission, Texas, will teach classes in public school administration during the summer months in the University of Georgia. Superintendent E. R. Bently of McAllen, Texas, has resigned and will be connected with the Texas Christian University.

—Superintendent E. B. Stover, after nine years service, has been re-elected for two years at Orange, Texas, at a salary of $4,000. During his term of service he has brought about a comprehensive building program, including three modern grade buildings and a high school at a cost of $425,000. All old buildings have been replaced by new.

—Supt. Chas. A. Jahr of Elkhorn, Wis., has been reelected for a three-year term, at a salary of $3,200.

—Supt. Rudolph Mueller of Forest Park, Ill., has been reelected for the coming year.

—Mr. John R. Patterson of Bucyrus, O., has been elected superintendent of schools at Athens.

—Supt. George D. Dieterich of Carrollton, Mo., has been reelected for the next year.

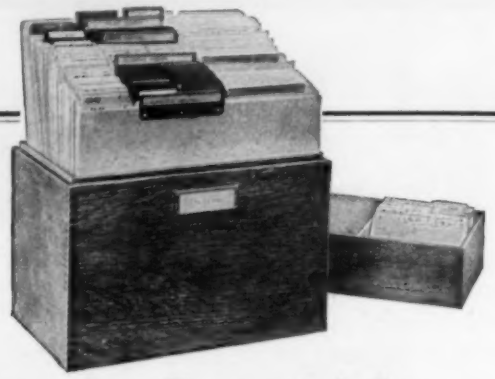
—Mr. S. B. Mordy of Valley Falls, Kans., has been elected superintendent of schools at Madison. He succeeds C. F. Turner who goes to Hartford.

—Supt. J. B. Stout of Grantfield, Okla., has been reelected for another year.

—Dr. Wm. J. O'Shea was elected superintendent of schools of New York City on April 23rd, succeeding Dr. Wm. L. Ettinger who had filled the office for the past six years.

Dr. O'Shea has been an associate superintendent for the last six years and has been connected with the city schools for 36 years.

THE NEW BRITISH MINISTER OF EDUCATION.
A home study of Mr. C. P. Trevelyan, the President of the Board of Education of the Labor Cabinet of England, with his wife and their children.



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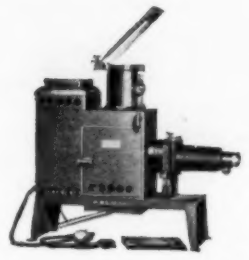

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RAISE FUND

A campaign to raise $10,000 for the Meriden Children's Welfare League, Meriden, Conn., has just closed. Nearly the entire amount was raised and it is probable that this will go over the top when all lodges and societies have been heard from. The annual requirements to carry on the work include rent of the clinic rooms, secretary, nurse, expense of free milk, medical and hospital care, special cases, medical and dental supplies, office, janitor, and a small amount for miscellaneous expenses. The children and teachers of the public schools of the city raised about $1,500 toward the sum needed. People gladly responded to the appeal. The newspapers were generous in their reports and merchants used some of their advertising space to further the good work. One of the articles that received leading place in a local daily read as follows:

Do Your Bit for the Kiddies

What is the Meriden Welfare League doing?

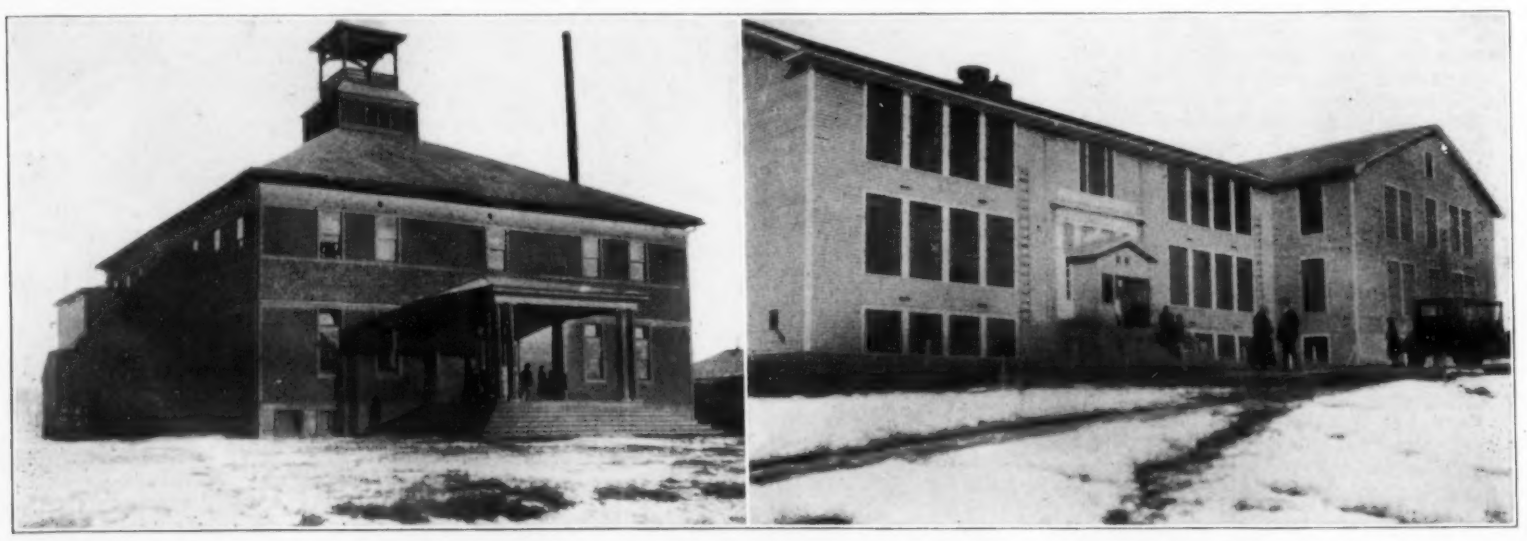
Here's one answer: Some time ago a little girl, crippled by infantile paralysis in infancy, when that scourge swept sections of the country, moved here from Boston with her family. In Boston she had submitted to a Lorenz operation which necessitated her being kept under observation for a long time. Coming to Meriden she was brought to the Welfare League's clinic. Physicians examined her and were quick to see the good results coming from the treatment at the hands of an eminent Boston specialist. They thought the work should be completed and the girl restored to health. But the family was poor. About $250 was required.

What happened? The Welfare League advanced the money to the child's family, and the girl was enabled to return to Boston to have the treatment completed.

Result: The little girl has been restored to health. The mother started to work for the purpose of earning sufficient money to refund the league for its loan. Today, more than one-half of the debt has been repaid.

"Do your bit!" to make the world brighter for the unfortunate "kiddies."

—At Pasadena, Calif., all business establishments close in order that all the community may attend the graduating exercises of the local high school. More than 25,000 persons saw the pageant recently, following which the members of the 1923 class received diplomas in the great "rose bowl."



TWO EFFICIENT SCHOOL BUILDINGS AT FAIRBANKS, ALASKA.

The illustration above shows at the left the Elementary and High School building and at the right the Alaskan Agricultural College and School of Mines. The former is a complete twelve-year school conducted by experienced teachers. The building is fully equipped with laboratories, a library, etc. The high school has an enrollment of 57 and is fully accredited for colleges in the United States. The teachers' salaries in the grades range from $1,650 to $2,000 for a term of nine months. In the high school the salaries range from $2,000 to $2,250.

The agricultural college is on an elevation which commands a magnificent view of the Tanana Valley and the main Alaskan Mountain Range. It has an enrollment of 60 and a faculty of ten members. It offers a four year course leading to degrees in the following lines of work: mining, agriculture, business administration, biology, general science, home economics, engineering and metallurgy.

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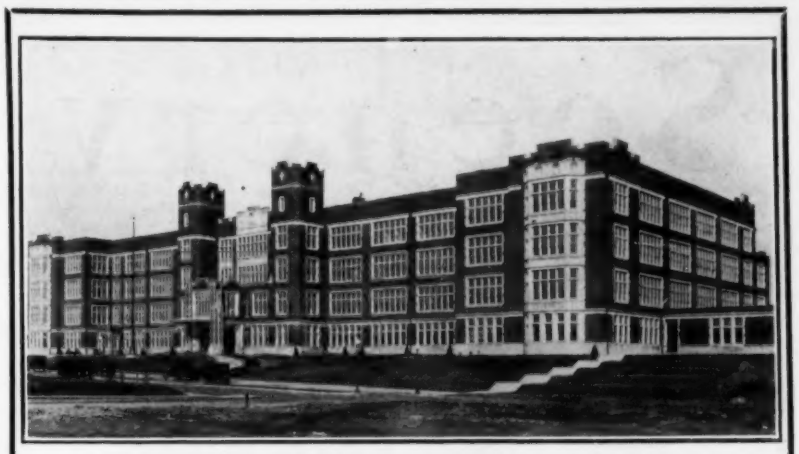

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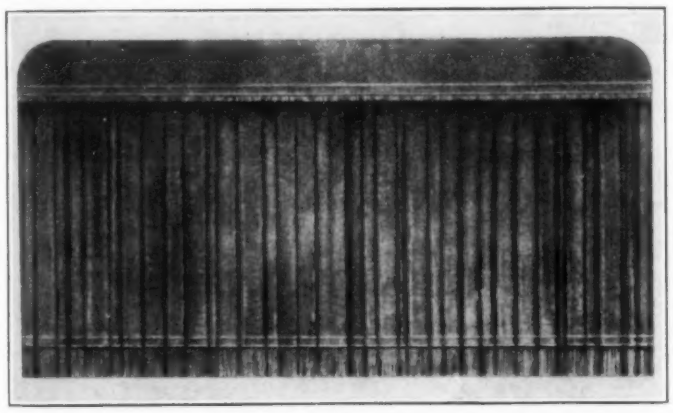

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LAW AND LEGISLATION.

—Women teachers in Knoxville, Tenn., who marry in the future will lose their positions. The superintendent reported that 45 teachers had been married and that thirteen had been lost to the schools because of marriage while under contract.

—Directors of independent school districts or townships in Iowa would be permitted to enter contracts for the services of a superintendent after the superintendent had served several months of the required first year contract, under an amendment to the bill covering duties of school directors.

—Senator McGrane of Providence has introduced in the Rhode Island Senate, the Strayer bill providing for a new board of seven members and for a reorganization of the entire school system. Members of the committee, under the bill are to be elected at large, and by petition and the ballot containing school candidates will be separate from those containing candidates for other offices.

—Senator Downing has introduced a bill in the New York legislature providing for salary increases for superintendents of schools of New York City. The salary of the city superintendent, under the bill, is fixed at $15,000 instead of $12,000. The architect and superintendent of buildings at present receives $25,000. Increases are also provided for the associate superintendents and district superintendents in line with the new policy.

—The Knoxville, Tennessee, board of education has closed a contract with Mr. W. B. Ittner of St. Louis for a population school survey, the work to begin at once. This survey is preliminary to a campaign for a projected bond issue for money to build additions to present buildings and also to construct new ones. It is the purpose of the board to endeavor to secure sufficient funds to make sufficient additions to buildings and to build such a number of new ones as will give every child a seat without double division or part time work. The school enrollment of the schools for this year is expected to approximate 20,000, of which number there will be 2800 in the high schools. The regular school expenditures for the present year will amount to $820,000.

A committee of the board and the superintendent is preparing a new salary schedule which, it is expected, will provide much stronger educational qualifications for teachers entering the system and also give increased annual advances corresponding more nearly to the relative merits of teachers.

The board has already adopted a new rating scale for teachers which it is believed will more nearly approximate the value of teachers to the schools than the plan hitherto used.

ASSOCIATION ELECTIONS

Inland Empire Teachers' Association at a meeting held at Spokane, Washington, elected the following officers: President, W. M. Kern, Walla Walla; vice-president, W. J. Kerr, Corvallis; secretary, James A. Burke, reelected for the eleventh time; Miss Mattie L. Shoup, Missoula; C. R. Frazier, member executive committee.

—J. A. Marion of St. Boniface, was elected president of the Manitoba, Canada, School Trustees Association. Other officers elected were: Vice-president, P. W. Thompson, Oak River; secretary-treasurer, H. W. Cox-Smith, High Bluff; executive, J. A. Glenn, Russell; Joseph Gibson, Verden; G. H. Foster, Souris; Wm. Iverach, Isabella; H. N. MacNeill, Dauphin; W. H. French, Stony Mountain.

—W. G. Pense, superintendent at College Springs was elected president of the Southwestern Iowa Teachers' Association. Superintendent B. K. Orr of Stanton was elected vice-president and Superintendent. E. L. Weaver of Clarinda, secretary-treasurer. H. M. Taylor, Superintendent-elect of Shenandoah was chosen chairman of the executive committee.

—Claude A. Bruner of Labanon was elected president of the Western Ohio Superintendents' Round Table. Other officers elected are. H. A. Hartman, Sidney, executive committee chairman; H. C. Aultman, Xenia, executive committee member; and O. H. Bennett, Cincinnati, secretary and member of the executive committee.

The superintendents adopted a resolution asking the state to prepare standard plans and specifications for school buildings of various sizes that will be adaptable to the needs and finances of the communities for which new buildings are needed.

SEVEN KILLED, HUNDRED HURT—TORNADO'S TOLL IN SHAWNEE, OKLA.

Not even a heavily-built brick schoolhouse could withstand the terrific force of the tornado which swept Shawnee, Oklahoma, March 28, while frame buildings were ripped to kindling in some cases and hardly harmed in others. Between 150 and 200 homes were wrecked, seven persons killed, and a hundred or more hurt. But that all students of the school were dismissed twenty minutes before the crash, the death list would have been appalling. Underwood & Underwood, Photo.

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The one text that combines individual attention to individual needs with full recognition of the way in which spelling is used and learned; the standard of comparison.

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These books build habits. They use all approaches, they motivate review, they associate practice with everyday life, and beyond all other texts, they interest.

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A series built on long experience and proven principle, simplifying and applying the subject and giving the teacher the maximum of help. They produce accuracy.

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A hero-story history for early grammar grades, this text aims through colorful narrative and vigorous detail at increased sympathy rather than fact assimilation, and awakes a genuine thirst for history.

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BOOK REVIEWS

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The authors have prepared a fifth year book which is designed to develop the power to read with speed and understanding. The text deals with animated subjects which excite the student's imagination and reasoning powers. It is prefaced with a discussion on the value of silent reading and with suggestions to the students in using the book.

Psychology in Theory and Application

By Horatio W. Dresser, Ph.D., 750 pages. Price $3.50 net. Thomas Y. Crowell Company, New York.

Psychology is holding the center of the stage. Books on all phases of this interesting subject are coming more and more numerously from the press. So far, however, most of these books undertook to treat about some particular part of the subject. As far as we know, Dr. Dresser's volume is the first to attempt to present in one comprehensive volume a survey of the entire field.

The purpose of the book, as the author tells us in the preface, is "to coordinate the various divisions and applications of psychology so far as they belong under the head of science." It is not "an exposition of a special point of view, such as behaviorism, since partisanship of this sort would limit the work of coordination and would exclude issues by no means settled among psychologists." The volume was written "to meet the kind of need which arises in science when knowledge increases so rapidly that systematic thought can hardly keep pace with it."

Coordination of this sort is particularly called for in psychology "as the science which affords a common basis for many of the interests of most vital concern to man."

To carry out this purpose of coordination, Dr. Dresser divides the field into five parts. In Part One he discusses General Psychology in its elementary principles, habit, emotion, thought, temperament, will, personality. Part Two deals with the Hidden Self, the normal and abnormal, suggestion, psychotherapy, psychoanalysis, sleep and dreams, the subconscious. Part Three considers vocational and industrial psychology; Part Four, Social Psychology; and Part Five discusses the highly important phase of Social Organization—social progress, conflicting groups, leadership and the masses, social service and domestic life, psychology of religion, organization of the Self.

It is impossible in a short review to give an adequate appreciation of such a comprehensive volume. Dr. Dresser writes from a close and intimate knowledge of the whole field. He has studied deeply and read voluminously. However, he is not a blind follower of any particular theory or school of thought, but throughout the volume submits the views of others to keen and critical study, accepting what he considers true, rejecting what is unproved, trying to complete what has been left uncompleted by others, and advancing ideas which are meant to establish harmony and offer a solution to the various problems we are facing in psychology. Aware of the need of a central viewpoint about which all the ideas might be grouped, Dr. Dresser finds such a viewpoint in the idea of 'purpose.' He takes a determined stand against behaviorism as too mechanical and automatic to interpret the facts of psychic life. Modifying Woodworth's conception of "the drive," he claims that "purpose" is a more satisfactory and exact explanation. He writes (page 17): "There is selective activity in process in the development of the instincts and their allied emotions: 'purpose' brings together in a single principle the implications of both the drive and the end which it pursues. This conception will give us a view of the instincts as springs of energy (McDougall), a view of the behavior of the natural man; and a theory of the whole field of mental life with its various elements and phases, including attention and interest, imagination, temperament, character intellect, will; as well as a basis for social psychology, and an opportunity for reconstructing the data of mental life."

Beyond doubt there is purpose in the original dispositions and instincts, in the tendencies and urges of human nature, in habit, emotion, thought, will, imagination. But purpose alone does not explain what is the cause of initiative and direction of human action towards purpose. It is more fundamental to enquire what it is that truly initiates human activity, what it is that directs the complexity of tendencies to an end. There is something self-determining about man's activities, which is an intelligent force and can marshall all his powers to attain well-devised ends. This is nothing else than an enlightened will, will directed and governed by reason, selecting by free choice the courses of conduct open to man. Accordingly the puzzling complexity of man is reduced to unity by the intellect and will, by the rational side of his nature. Unless we admit such an intelligent directive force, behaviorism with its mechanism would be the most logical explanation of human conduct. Dr. Dresser sees only too well that man is more than a mechanism and that his spiritual nature cannot be stated in terms of 'conditioned reflexes.' Although Dr. Dresser takes higher ground than many psychologists, it seems to us that he has not gone far enough and that he falls short of a solution inasmuch as he does not explain rightly the last and deepest source of human conduct and action, which lies in his power of intellect and will, which is the personal basis of responsibility, and which is the main factor in character and the Self. The whole question becomes very clear in its general outline, and truer too, when we recognize the spiritual element in man, his soul, with its rational powers of reason and will. Taking these powers as fundamental and highest in man, we are able to understand how hereditary forces, instincts, habits, emotions, and whatever other powers man possesses, can be and should be made subservient to his higher purposes, to that fullness of life which it is his power to reach. This idea, too, would give a rational explanation to the various phenomena of social psychology and social relations.

It seems clear to us that we are relying too much on psychology as the sole factor in the explanation of human life and action. As Dr. Dresser admits, man is a social being, with social instincts and tendencies. Although psychology may tell us a great deal about man's

(Continued on Page 147)

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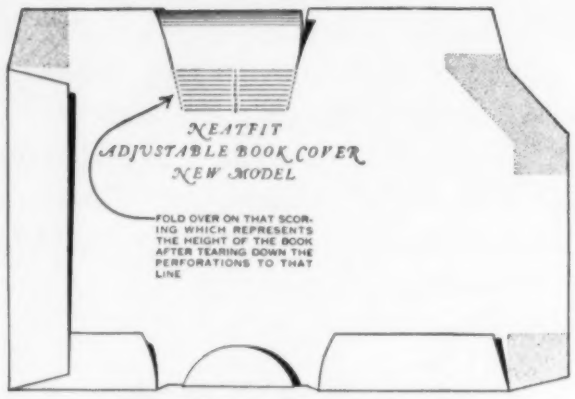
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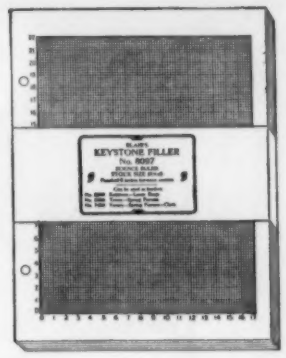

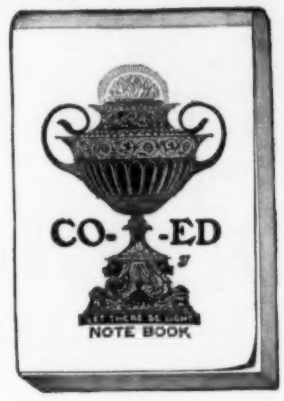

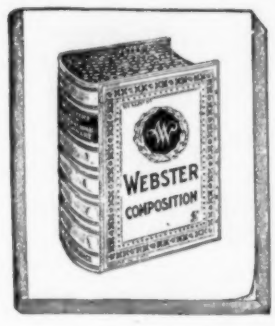

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(Continued from Page 144)

activity in the social group, it cannot tell us directly what makes society possible in the co-operation of its individuals toward the end of human society. We are eager to coordinate science. Why not bring about this coordination in the case of man by a coordination of all the sciences which necessarily bear on the case? We readily grant that psychology is not ethics; but is it not true that we are failing to explain the whole of human nature and human conduct by shutting off psychology and ethics into air-tight compartments, as if the one had no relation to the other? We are, therefore, not solving the important problems we set out to solve. It might serve science better were we to remember that truth is a harmonious whole, and that truth discovered and proved in one field throws light upon other truths discovered and proved in other fields. In the acceptance of this broader and more correct view our progress in the study of human nature and its activities would be surer. It may be that Dr. Dresser had this in mind. We learn that he has a companion volume in press, entitled Ethics in Theory and Application. It will prove interesting to know how he approaches the subject.

There is much good in Dr. Dresser's book. By saying this we do not subscribe to his views. In fact there are many with which we disagree. We cannot indicate all of them. We shall touch very briefly on a few.

The question of habit has caused psychologists much concern. A mere organic explanation does not and cannot account for the rational element in habit, for habits of thought and will. It is the same difficulty that psychology encounters quite generally, since it does not admit a soul, or if it does, it seems unable to understand the relation between soul and body. Nor can we accept the author's idea of desire. On page 50 he writes: "In a profound sense, therefore, desire is part of our native equipment as the primal 'urge' which sends us forth in all our activities; it is not to be separated from instinct, which prompts us to seek our goal." 'Desire' and 'urge' are not the same things. There are blind 'urges' in human nature, whereas desire is the tendency of the will towards an object intellectually apprehended as good. There is rationality in desire, not mere instinct.

Referring to the will, Dr. Dresser seems to identify it with attention. We quote from page 107. "In another aspect," so writes the author, "it (attention) is will, which appears in contrast with impulse, instinct, desire; and manifests itself as selective in a high degree, or as personal, assertive, sometimes arbitary, growing by use." Attention is that activity of the intellect which holds an object or idea in the focus of consciousness. Will, however, is that dynamic power which can compel, choose, select. It is not a cognitive but an appetitive force. It does not weigh and deliberate, these are activities of the intellect; it chooses when motives for choice have been given it by reason.

The idea of sin as explained on page 518 is utterly absurd. Sin is wrong-doing in the moral sense. It consists in this that man deliberately does what he knows to be morally wrong. On this very idea, coupled with man's responsibility, depends the ethics of crime. For there is ethics in crime not merely psychology.

The chapter on Social Progress requires discriminating and careful reading. Some of the statements made there may rightly be questioned. The entire problem rests on the question, what is progress? Surely it means more than any forward movement. It means genuine betterment of the whole social organization, and this betterment must have a more solid basis than mere advancement in time.

The chapter on The Psychology of Religion is, perhaps, the one to which greatest exception may be taken. Religion is not mere feeling or sentiment, and Miss Underhill's views, which the author apparently favors, are full of errors. There is no religion without specific relations to God, implying very definite duties on the part of man. Too much has been written since the appearance of W. James' book in 1902 about the psychology of religion, which is inaccurate and misleading, neglecting as it does the historic fact of divine revelation with its positive doctrines.

Enough has been said to show that Psychology in Theory and Application demands leisurely and careful reading. As an effort to coordinate the many phases of psychology it deserves praise. Deserving of mention, too, is the avowed position of the author against materialism. But we may be allowed to repeat what we said before. In order to obtain a true and complete knowledge of man's position in the universe of things, we must not cramp our mental outlook. We must expand our vision and must take into account all the objective facts and science must not be afraid to face the eternal verities of God.

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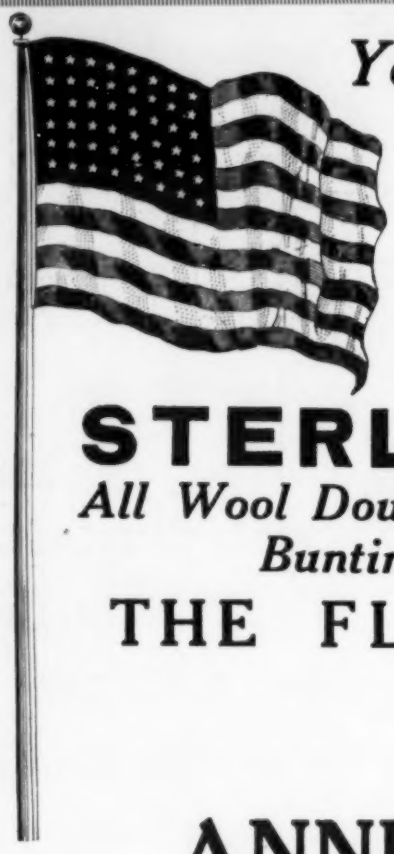

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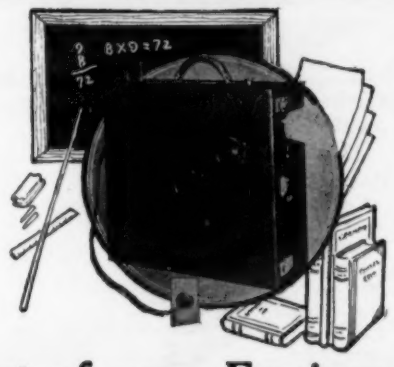

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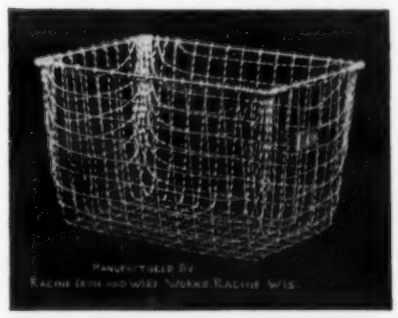

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THE NORTON DOOR CLOSER CO.
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(Continued from Page 148)

photo-engraved specimens of handwriting of pupils from all parts of the country has been provided for the benefit of teachers and supervisors.

The Constitution of the United States

Price, $0.24. D. C. Heath & Co., Boston, Mass.

This little book reprints in large type the constitution of the United States for the use of elementary and high school classes where the subject is required. A careful synopsis gives the outline and framework of the document, together with definite references to the articles and sections in which the different topics are treated. The book is supplied with questions calling attention to the especially significant parts of the document.

Tobacco and Mental Efficiency.

By M. V. O'Shea, Professor of Education, University of Wisconsin. Cloth bound, 258 pages. Published by Macmillan Company, New York.

This book is the result of a study inaugurated by the "Committee to Study the Tobacco Problem" headed by Dr. Alexander Lambert of New York. Believing that the annual expenditure of $1,600,000,000 for tobacco constitutes an item big enough to warrant a study of effect of tobacco upon mental efficiency Professor O'Shea undertook the task of bringing out the facts on the subject.

The author begins by presenting conflicting ideas, discussing the habits of prominent men of the past, the teaching of men and women of distinction, and the verdict of observation. These several chapters bring a variety of opinions into play.

The reports on investigations, however, make out a case in favor of the non-smoker. For instance, in the colleges the attendance of the non-smoker is better than that of the smoker. The latter is absent more often due to headaches than the former. The scholastic standing of eighty one smokers in a university averaged 74.5 and for the same number of non-smokers 79.4 percent.

In his conclusions the author states that "the results show that tobaco tends to retard and to disturb intellectual processes" but not in a marked degree in the case of the particular functions which were investigated. "The data from the psychological laboratory do not show that a pipe of tobacco will uniformly retard and disturb intellectual processes in the case of any person. However, it can be said that, taking a large number of individuals, tobacco will slow down the intellectual processes of the majority of them."

Workaday Arithmetic

By Margaret M. Campbell. Cloth, 179 pages. Published by The Century Co., 353 Fourth Avenue, New York.

This book is a decided departure from the conventional arithmetic. The author has definitely begun with the workaday and home uses of figures and figuring—in the store, in the shop, in saving, in using money, in school club work, in athletics, in construction work,—to develop groups of typical problems. Into these she has systematically woven the principles of arithmetic and their application and has added sufficient practice sheets to give ample drill material. Her plan is to show a definite use of arithmetical rules and principles by first giving an application to real life problems and by causing children to first reason them out by contact with these life problems.

The presentation of the work is novel and permits of individual work as well as the usual group study. There is evidence throughout of careful motivation, of ample allowance for individual differences in ability and previous arithmetical knowledge, and of clear understanding of vital life needs.

The long foreword contains some debatable material and some excellent arguments for the use of the book, but it should be omitted from any books placed in the hands of children.

The Determining Factors in the Evolution of the Industrial Arts in America. By Arthur B. Mays. Paper, 32 pages. The Bruce Publishing Company, Milwaukee, Wisconsin. Provides a valuable discussion of the historic development of manual training and industrial-arts instruction in the United States.

Print Shop Arithmetic. By J. A. Ginsbach. Cloth, 52 pages. Price, $1. The Manual Arts Press, Peoria, Ill. A practical text for school shop use.

Lettering Exercise Manual Slant Gothic

By Jonathan Bright and John F. Faber. Paper, 64 pages. Price 56 cents. The Bruce Publishing Company, Milwaukee, Wisconsin.

This manual provides a specific series of lessons in lettering for students of mechanical drawing. The work is ample in scope to give exercises in awkward combination of letters, in spacing, in adapting lettering to special uses, etc.

Witham Comprehensive Seventh-Grade History Tests. By Ernest C. Witham, director of research, Wilmington, Delaware. Published by the J. L. Hammett Company, Cambridge, Mass. Two tests on American history for seventh and eighth-grade classes.

PUBLICATIONS RECEIVED

Representative City Elementary School Buildings of Illinois. The law governing the sanitation of school buildings. Circular No. 182, 1924, issued by the state superintendent, Francis G. Blair, at Springfield, Ill. This bulletin, which has been prepared by Mr. W. S. Booth, supervisor of city elementary schools, is intended to bring more directly before those in charge of the first eight grades of the common schools, what has been achieved and what needs to be done in order to give the schools an equal standing with high schools. The bulletin describes and illustrates plans for elementary and high school buildings, gives an outline of the law relating to sanitation of buildings, points to the duties of superintendents and boards of trustees, and outlines the requirements for lighting, seating, water supply, toilets, and safety against fire.

Teachers' Difficulties in Arithmetic and Their Correctives. By Ruth Streitz. Price, thirty cents. Bulletin No. 18, 1924, issued by the University of Illinois, Urbana. All teachers are not equally efficient in the application of a given method and teaching device; the pooling of successful practice should provide a store of procedures to which teachers may turn for assistance in handling difficulties which they encounter. This bulletin reports the results of an attempt to collect successful teaching procedures in the field of arithmetic. The pamphlet discusses difficulties relating to general phases of arithmetic, difficulties encountered in operations of the subject, and difficulties relating to denominate numbers and problem solving.

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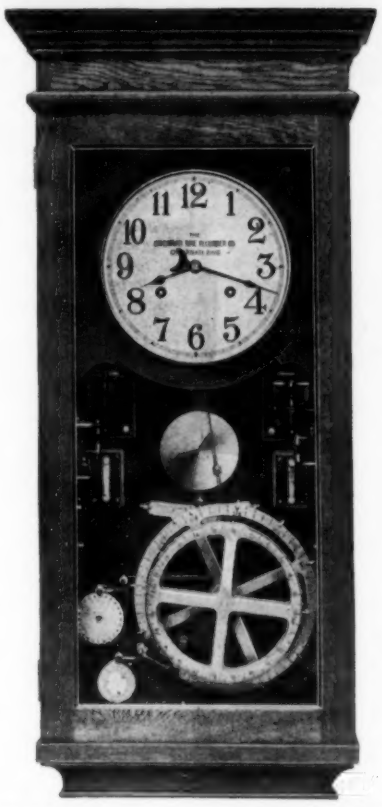

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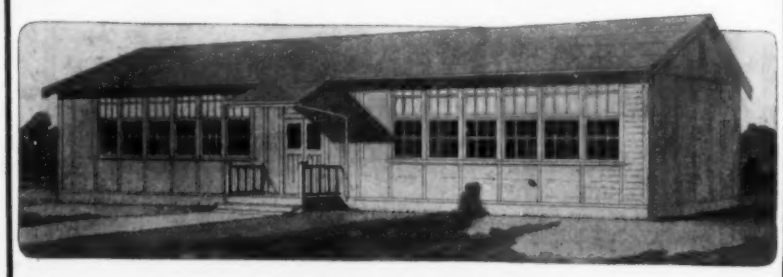

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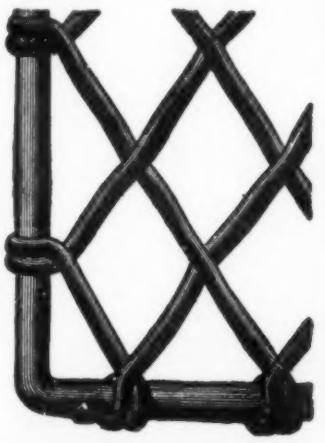

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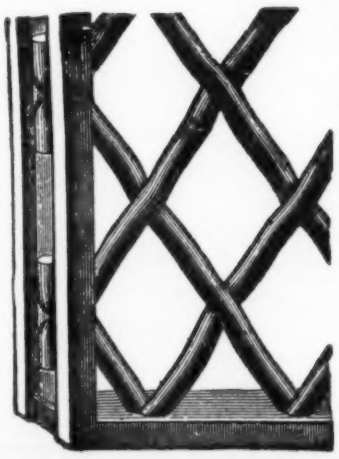

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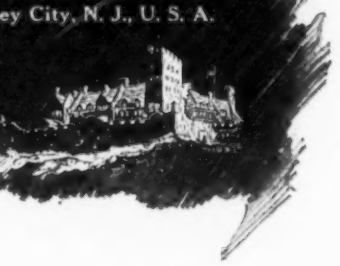

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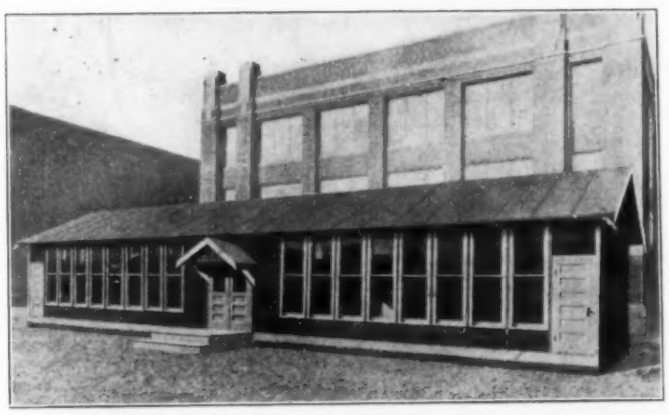

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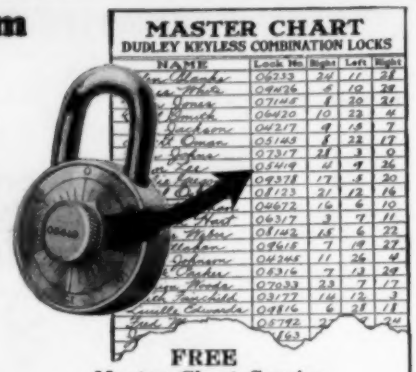

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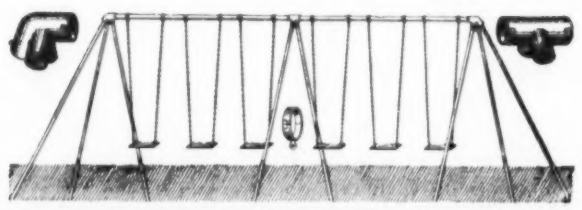

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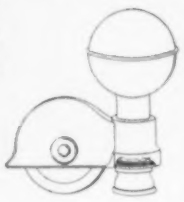

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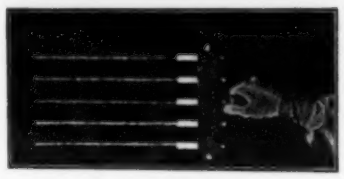

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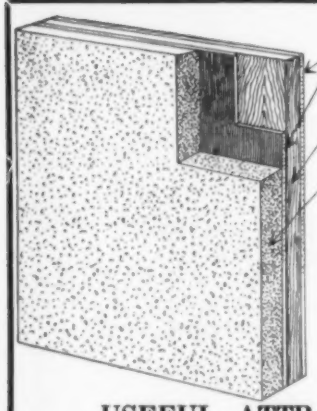

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We Manufacture All Sizes. Write for Sample.

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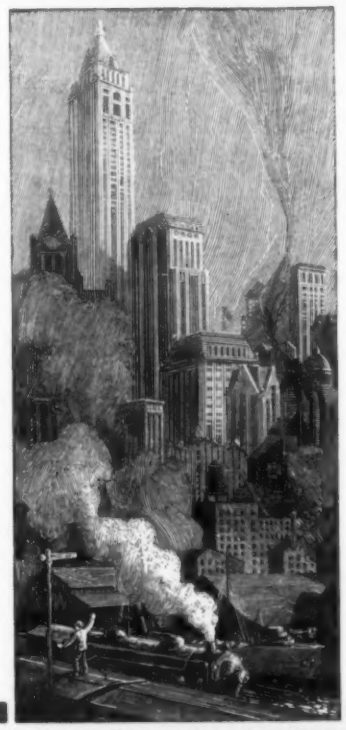

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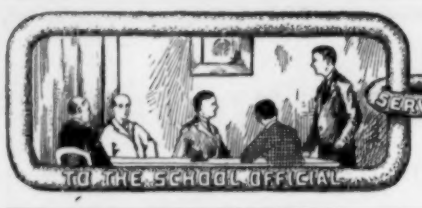
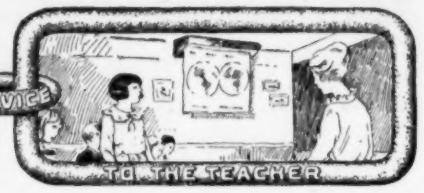
Address.....

City..... State.....



TEACHER AGENCIES



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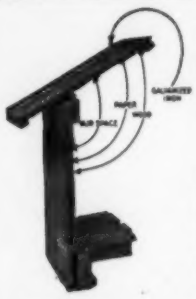
in Principal Cities.



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STEEL LOCKERS AND SHELVING

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Steel Lockers and Shelving

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specializes in securing Christian teachers, officers and helpers for schools, colleges and universities—private, public and denominational—and in assisting trained, Christian teachers and other workers to larger fields of service. Write today for information to

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The rate for Classified Advertisements is 10 cents per word per insertion, payable in advance. Forms close the 15th preceding the date of issue.

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Diplomas—in any quantity—Tell us what you require and samples with quotation will follow. Ames & Rollinson, 206 Broadway, New York, N. Y.

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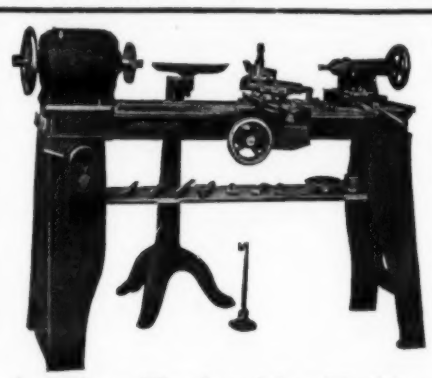
A few high-grade salesmen are wanted by a manufacturer of a product used by schools. This product is required by law in many states and is primarily essential to every school. If you can sell to school boards and wish to become permanently established with a reputable company, write your qualifications, salary expected, experience, etc., to M-21, American School Board Journal, Milwaukee, Wisconsin.

Will pay 25 cents for copies of February and December, 1921. Copies must be in good condition. Address Subscription Department, American School Board Journal, Milwaukee, Wis.



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consult the School Authorities of Buffalo, Jersey City, Memphis, San Francisco, Winnipeg, Rochester and a hundred other cities we could name if space permitted and learn what they think of American Woodworking Machinery for Manual Training Work.

Every School Board should have our catalog on file.
Let us send you a copy.

American Wood Working Machinery Co.
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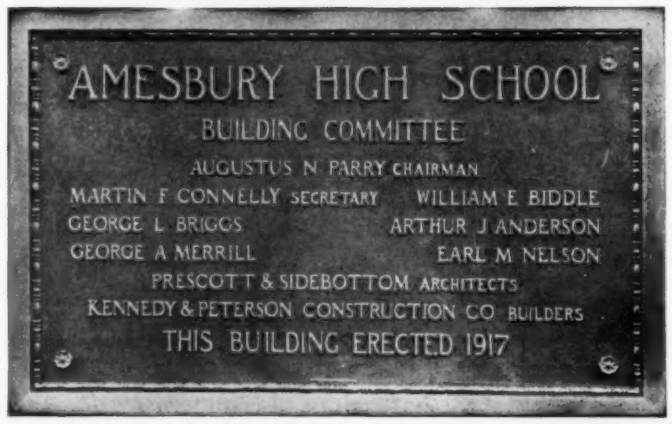

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SERVICE IMPORTANT TO SUPERINTENDENTS AND SCHOOL BOARDS

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EDUCATION SERVICE, 1254 AMSTERDAM AVE., NEW YORK. The CHICAGO OFFICE of EDUCATION SERVICE, 19 SO. LA SALLE ST., makes a specialty of public school work, including teaching and administrative positions, also such positions as business managers and purchasing agents for schools, registrars, private secretaries, cafeteria directors, and trained nurses.

AMERICAN COLLEGE BUREAU, 77 W. WASHINGTON ST., CHICAGO. Exclusively for college and university teachers.

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1—Those who desire a better locality.
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Handicraft Bldg., 89 So. Tenth St.
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Southern Teachers' Agency
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No advance fees.
Covers Middle Atlantic, South and Middle West

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Positions waiting—correspondence confidential.

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Recommends only well qualified teachers.

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Purpose—Efficient service for better schools
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Albany Teachers' Agency, Inc.
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Provides Schools and Colleges with Competent Teachers.
Assists Teachers in Securing Positions.
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Twenty Years of Real Service to School Boards
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INTERSTATE TEACHERS' BUREAU,
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Organized 1901. Prompt and effective service.
Member, National Association of Teachers' Agencies.

We Specialize in Brains

Character, Personality, Teaching Power and Service. By advertising more widely than any other Agency, and by visiting State and District meetings, schools and colleges, from Dakota and Minnesota to Texas and Oklahoma, we have built up the largest SELECT LIST of LIVE teachers ever assembled. *Our tenth year of recommending only when asked to do so by employers.* Owing to our professional standards most of the Higher Institutions as well as the best Secondary schools in forty-four States and three foreign countries used our service the past season. Fifteen hundred square feet of office space, with every known equipment for doing efficient work, INCLUDING A FINDEX BUILT TO ORDER, enables us to fill vacancies from Kindergarten to University with teachers who have been tested, investigated, and, in many cases personally interviewed by our representatives direct.

A Distinct Service for Educators Who Appreciate Ethical Standards.

THE WESTERN REFERENCE & BOND ASSOCIATION
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Branch Offices: 1836 Euclid Ave., Cleveland, Ohio.
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A Superior Agency for Superior People. We Register Only Reliable Candidates. Services Free to School Officials.

F. T. Persinger, Manager
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TEACHERS: If you are looking for a position, we can place you.
OUR MOTTO: The right teacher for the right place—prompt service.

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We do not confine our efforts to Southern territory and appreciate vacancies from other sections. We have teachers enrolled from all states.

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We Render Efficient Service to School Boards and Teachers
The Only Agency That Maintains Educational Men Constantly in the Field

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Macheca Building, New Orleans, Louisiana.
Highest endorsements. Established 22 years. No branches. Services free to employers.

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Prompt, Efficient and Reliable Service.
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Established 1885—Still under same active management. Best Schools and Colleges permanent clients. Best qualified men and women on our available list. Prompt service.
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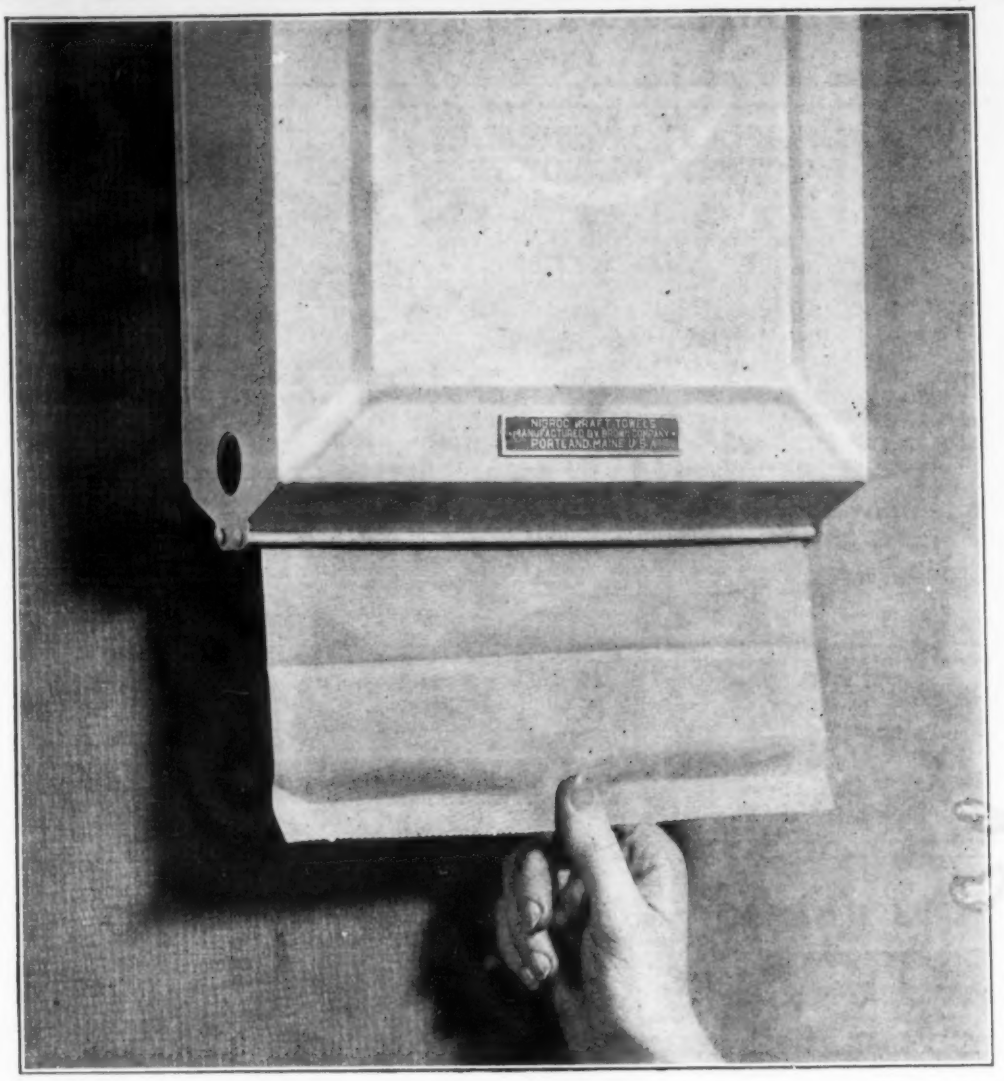
Receives calls at all seasons for college and normal graduates, specialists, and other teachers in colleges, public and private schools, in all parts of the country. Advises parents about schools.
WM. O. PRATT, Manager

THIS convenient cabinet keeps Nibroc Towels clean and dust-free, and serves them singly.

Easy to fill—

Merely open front, which is hinged at bottom. Slip the package of 250 towels into place. Draw out wrapper. Lock cabinet. That's all.



Nibroc—a paper towel *that seems made for school children*

If the Nibroc Towel were made especially to your order, it could not be better suited to school use.

The Nibroc fibre is highly absorbent—takes up the last drop of moisture. It doesn't lint—doesn't tear easily—doesn't get soggy. You can wipe hands and face vigorously with a Nibroc Towel. It is agreeable to use, and leaves a pleasant feeling that encourages children to be clean.

The Nibroc Towel doesn't roughen the hands.

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You yourself will enjoy using the Nibroc Towel. Let us send you enough samples to make a thorough test in your office or home.

The manufacturers, Brown Company, Portland, Maine, will be pleased to mail to members of School Boards or of any educational institution a sample pack of Nibroc Towels.

School Goods Directory

The names given below are those of the leading and most reliable Manufacturers, Publishers and Dealers in the United States. None other can receive a place in this Directory. Everything required in or about a schoolhouse may be secured promptly and at the lowest market price by ordering from these Firms.

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Buckeye Blower Company
Buffalo Forge Company
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Nelson Corporation, The Herman
Reed Air Filters, Inc.

AIR FILTERS
Midwest Air Filters, Inc.
Reed Air Filters, Inc.

ASH HOISTS
Gillis & Geoghegan

AUDITORIUM SEATING
American Seating Co.
Arlington Seating Company
Heywood-Wakefield Co.
Kundtz Company, The Theodor
Newton & Holt Company, The
Peabody School Furniture Co.
Steel Furniture Company

BASEMENT SASH, STEEL
Detroit Steel Products Company

BASEMENT WINDOWS, STEEL
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Beckley-Cardy Co.
N. Y. Silicate Book Slate Co.
Rowles Co., E. W. A.
Standard Blackboard Company
Weber Costello Co.

BLACKBOARD-SLATE
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Natural Slate Blackboard Co.
Penna. Structural Slate Co.

BOILERS
Kewanee Boiler Company

BOOK CASES
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Library Bureau
Newton & Holt Company, The

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Iroquois Publishing Company
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Walraven Book Cover Co., A. T.

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Houghton, Mifflin Co.
Iroquois Publishing Company
Laidlaw Brothers
Lippincott Company, J. B.
Little, Brown and Company
Newson & Company
Pitman & Son, Isaac
Rand, McNally & Company
World Book Company

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Robertson Products Co., Theo. B.

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Asbestos Buildings Company
Detroit Steel Products Company
Durlron Co., Inc., The
Indiana Limestone Quarrymen's Assn.
National Bldg. Granite Quarries Assn.
Structural Slate Company

BUSSES
International Harvester Co. of America

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McConnell Map Company

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Sani Products Co., The
Van Range Co., John

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CHEMICALS
Heil Chemical Co., Henry

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International Time Recording Company
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Standard Electric Time Co.

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American Crayon Co.
Binney & Smith
Levison & Blythe Mfg. Company
National Crayon Co.
Peckham, Little & Co.
Rowles Co., E. W. A.
Weber Costello Co.

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Colt's Patent Fire Arms Mfg. Co.

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Robertson Products Co., Theo. B.

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Shewana Cabinet Works

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Christiansen, C.
Crane Company, Wm. M.
Freeport Gas Machine Co., Inc.
Kewaunee Mfg. Company
Newton & Holt Company, The
Peterson & Co., Leonard
Pick & Co., Albert
Sheldon & Co., E. H.
Van Range Co., John

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Norton Door Closer Co.
Sargent & Company

DOORS, STEEL-FIREPROOF
Detroit Steel Products Company

DRAFTING ROOM FURNITURE
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Economy Drawing Table & Mfg. Co.
Kewaunee Mfg. Company
Sheldon & Co., E. H.

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Murdock Mfg. & Supply Co., The
Nelson Mfg. Company, N. O.
Puro Sanitary Drink. Fountain Co.
Rundle-Spence Mfg. Company
Taylor Company, Hasley W.

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American Wiremold Co.

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Rowles Company, E. W. A.
Weber Costello Co.

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Weber Costello Company

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Page Fence & Wire Prod. Assn.
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Potter Manufacturing Corp.
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Vonnegut Hardware Co.

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Dahlstrom Metallic Door Co.

FIREPROOFING MATERIALS
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Dettra & Co., Inc., John C.

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Heywood-Wakefield Co.

FLOORING
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Marbleloid Company

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Haas Company, Philip

FOLDING PARTITIONS
Wilson Corp., Jas. G.

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Arlington Seating Company
Beckley-Cardy Co.
Columbia School Equip. Works
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Gunn Furniture Company
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Lauter Company, The H.
Library Bureau
Maple City Stamping Company
Mutschler Brothers Company
National School Equipment Company
Newton & Holt Company, The
Peabody School Furniture Co.
Readsboro Chair Company
Rowles Co., E. W. A.
Scientific Seating, Inc.
Steel Furniture Company
Standard School Equipment Co.

GAS MACHINES
Freeport Gas Machine Co., Inc.
Matthews Gas Machine Co.

GAS STOVES
A. B. Stove Company

GLASS
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GLOBES
Nystrom & Co., A. J.
Weber Costello Co.

GYMNASIUM APPARATUS
Chicago Gymnasium Equipment Co.
Medart Mfg. Co., Fred
Narragansett Machine Company

GYMNASIUM BASKETS
Racine Iron & Wire Works

HEATERS
Smith System Heating Company

HEATING SYSTEMS
American Blower Company
American Foundry & Furnace Co.
Bayley Mfg. Company
Buckeye Blower Co.
Buffalo Forge Company
Crane Company
Dunham Company, C. A.
Healy-Ruff Company
Nelson Corp., The Herman
Peerless Unit Vent. Co., Inc.
Webster & Co., Warren

INK
Commercial Paste Company
F. N. Company, Inc., The
Levison & Blythe Mfg. Company
Rowles Co., E. W. A.

INK WELLS
Jacobus Pneumatic Inkwell Co.
Squires Inkwell Company
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JANITORS' SUPPLIES
Masury-Young Company
Palmer Company, The
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Van Range Co., John

KINDERGARTEN SUPPLIES
Hammett Company, J. L.

LABORATORY FURNITURE
Kewaunee Mfg. Company
Newton & Holt Company, The
Peterson & Co., Leonard
Sheldon & Company, E. H.

LABORATORY SUPPLIES
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LEVELS
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LOCKERS
Berger Mfg. Company
Durabilt Steel Locker Co.
Durand Steel Locker Co.
Federal Steel Fixture Co.
Lyon Metallic Mfg. Co.
Medart Mfg. Co., Fred
Narragansett Machine Company

LOCKS—KEYLESS
Miller Keyless Lock Co., J. B.
Triple Metals Corporation

MAPS
McConnell Map Company
Nystrom & Company, A. J.
Weber Costello Company

MEMORIAL TABLETS
Russell & Sons Co., Albert

METAL LATH
Berger Mfg. Company

MICROSCOPES
Bausch & Lomb Optical Co.
Heil Company, Henry
Spencer Lens Company

MODELLING CLAY
Hammett Company, J. L.

MOTION PICTURE MACHINES
DeVry Corporation, The

PAINTS
Devoe & Raynolds
Hockaday Company, The

PAINT SPRAYING EQUIPMENT
DeVilbiss Mfg. Co., The

PAPER BALERS
Davenport Mfg. Company, Inc.

PAPER TOWELS
A. P. W. Paper Company
Brown Company
National Paper Products Co.
Palmer Company, The
Robertson Products Co., Theo. B.

PASTE
Commercial Paste Company
Levison & Blythe Mfg. Company

PENCILS
Dixon Crucible Co., Joseph
Eagle Pencil Company

PENCIL SHARPENERS
Automatic Pencil Sharpener Co.

PENS
Spencerian Pen Company

PIANOS
Miessner Piano Company

PICTURES
Brown-Robertson Company

PLAYGROUND APPARATUS
Chicago Gymnasium Equipment Co.
Everwear Mfg. Company
Hill-Standard Company
Medart Mfg. Co., Fred
Narragansett Machine Company
Newark Steel Post Company

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Brunswick-Balke-Collender Co.
Century Brass Works, Inc.
Clow & Sons, James B.
Crane Company
Durlron Co., Inc., The
Haas Company, Philip
Hoffmann & Billings Mfg. Co.
Kelly & Bros., Thos.
Nelson Mfg. Company, N. O.
Rundle-Spence Mfg. Company
Speakman Co.
Vogel Company, Joseph A.

PORTABLE SCHOOLHOUSES
American Portable House Company
Armstrong Co., The
Asbestos Buildings Co.
Bossert & Sons, Louis
Circle A Products Corporation
Mershon & Morley
Minter Homes Corp.
Togan-Stiles Company

PROJECTION LANTERNS
Bausch & Lomb Optical Co.
Spencer Lens Co.

RADIATOR HANGERS
Healy-Ruff Company

REINFORCED STEEL
Berger Mfg. Co.

ROLLING PARTITIONS
Wilson Corp., Jas. G.

SANITARY NAPKINS
Cellucutton Products Company

SASH OPERATING DEVICES, STEEL
Detroit Steel Products Company

SASH, STEEL
Detroit Steel Products Company

SASH, VENTILATING
Detroit Steel Products Company

SAWS
Disston & Sons, Inc., Henry

SAVING SYSTEMS
American Banking Machine Corp.

SCENERY
Twin City Scenic Co.

SCIENTIFIC APPARATUS
Rowles Company, E. W. A.
Heil Company, Henry

SCREW-DRIVERS
Disston & Sons, Inc., Henry

SHOWERS
Hoffmann & Billings Mfg. Co.
Speakman Co.

SIGNAL SYSTEMS
Holtzer-Cabot Electric Co.

SOAP DISPENSERS
Soapitor Company

SPRAY-PAINTING EQUIPMENT
DeVilbiss Mfg. Co., The

STAGE EQUIPMENT AND SCENERY
Jackson Corp., A. P.
Lee Lash Studios
Twin City Scenic Company

STAIR TREADS
Norton Company

STEEL SASHES
Detroit Steel Products Company

STEEL STORAGE CABINETS
Newton & Holt Company, The
Durabilt Steel Locker Co.
Medart Mfg. Co., Fred

STEEL TENNIS POSTS
Newark Steel Post Company

STEEL WINDOWS
Detroit Steel Products Company
Truscon Steel Company

SWEEPING COMPOUNDS
Robertson Products Co., Theo. B.

TABLES
Gunn Furniture Company
Library Bureau
Mutschler Brothers Company
Newton & Holt Company, The
Rinehimer Bros. Mfg. Co.

TABLETS
Blair Company, J. C.

TALKING MACHINES
Victor Talking Machine Co.

TELEPHONE SYSTEMS
Automatic Eelectric Company
Federal Tel. & Tel. Co.
Holtzer-Cabot Electric Co.

TEMPERATURE REGULATION
Buffalo Forge Company
Johnson Service Company
National Regulator Company

THERMOMETERS
Heil Company, Henry
Wilder-Pike Thermometer Co.

TOILET PAPER AND FIXTURES
A. P. W. Paper Company
Palmer Company, The
Robertson Products Co., Theo. B.

TOILET PARTITIONS
Structural Slate Company

TYPEWRITERS
Underwod Typewriter Company

VACUUM CLEANING SYSTEMS
Spencer Turbine Company, The

VACUUM PUMPS
Nash Enginnering Company

VALVES—FITTINGS
Crane Company

VENTILATORS
Buffalo Forge Company
Globe Ventilator Company
Knowles Mushroom Ventilator Co.

VENTILATING SYSTEMS
American Foundry & Furnace Co.
American Blower Company
Bayley Mfg. Company
Buckeye Blower Company
Buffalo Forge Company
Dunham Company, C. A.
Healy-Ruff Company
Midwest Air Filters, Inc.
Nelson Corp., The Herman
Peerless Unit Vent. Co., Inc.

VOCATIONAL EQUIPMENT
American Woodworking Machinery Co.
Buffalo Forge Company
Christiansen, C.
Columbia School Supply Co.
Newton & Holt Company, The
Sheldon & Company, E. H.

WARDROBES
Newton & Holt Company, The
Wilson Corp., Jas. G.

WASTE PAPER BASKETS
Erie Art Metal Company
National Vulcanized Fibre Company
Newton & Holt Company, The

WEATHERSTRIPS
Athey Company, The

WINDOWS—ADJUSTABLE
Austral Window Company
Detroit Steel Products Company
Truscon Steel Company

WINDOW GUARDS
Badger Wire & Iron Works
Draper Shade Co., Luther O.
Stewart Iron Works Co., The

WINDOWS—REVERSIBLE
Detroit Steel Products Company

WINDOW SHADES
Athey Company
Draper Shade Co., Luther O.
Maxwell & Co., S. A.
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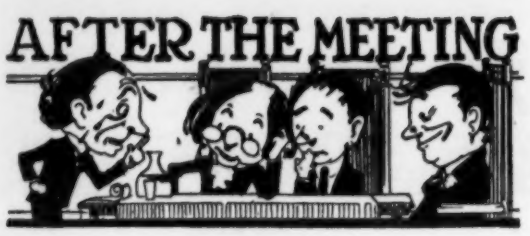


Spoiling the Fun

The teacher said to her pupils:

"Wouldn't this be a great world if people would all love one another and treat each other with kindness?"

One small boy looked doubtful.

"Wouldn't you like to see everybody treat everybody else with kindness?" the teacher inquired.

After a moment's reflection the boy answered:

"Then there wouldn't be any more Mutt and Jeff pictures."—Youngstown Telegram.

Barrett Wendell, the former critic and teacher, said at a dinner in Boston: "The detestable new-rich spirit toward learning and the arts, the hateful, materialistic post-war spirit that we see all about us—well, this spirit is exemplified in a little story. A school teacher said to a small boy: 'Joe, this arithmetic problem of your's about the huckster and the apples is all wrong. You'll have to stay after school and work it out.' 'How far wrong is it?' Joe asked. 'It's a dollar wrong,' replied the teacher. Little Joe, a profiteer's son, drew forth a roll of bills and peeled off a dollar. I'll just pay up, instead of working the thing out,' he said. 'You see I'm awfully busy this afternoon. Pop and me are going off for the week-end on our new flying boat.'"—Chicago News.

Then Teacher Had to Explain

Even the children are beginning to imbibe the confidence of the age in man-made laws as in some strange way the cause or at least the regulator of everything on earth. The Tatler tells us that a teacher was giving her class a lecture on gravitation. "Now, children," she said, "it is the law of gravitation that keeps us on this earth."

"But please, teacher," inquired one small child, "how did we stick on before the law was passed?"

Johnny's Excuse

This note was sent to a teacher by a mother to explain her son's absence from school:

Dear Mum: Please excuse Johnny today. He will not be at school. He is acting as timekeeper for his father. Last night you gave him this iximple. If a field is four miles square how long will it take a man walking three miles an hour to walk two and a half times around it? Johnny ain't no man, so we had to send his daddy. They left early this morning, and my husband said they ought to be back late tonight, tho it would be hard going. Dear Mum, please make the nixt problem about ladies, as my husband can't afford to lose the day's work. I don't have no time to loaf, but I can spare a day off occasionally better than my husband can. Resp'y yrs,

Mrs. Jones.

Did Not Keep Such Things!

The following letter, which is taken from the Journal of the American Medical Association, was received by a West Virginia teacher:

"You should find Lice before sending children home. Bonna has not got eney Lise on her head; more and that i dont keep such things in my home and more and that i do not thank you fore your Remady fore I have a Remady of my one I would not put oil on a childs head of mine at all fore it injuries the Mind an eats the Brain sow thare fore I will not put eney thing of that kind on there heads tharefore i dont want no more such insults as this sent to me ore I will get a Dr. to look her head and I will make it a hot six fore the wone that sent it to me."

A professor had a class in English composition, and was teaching them the intricacies of punctuation.

"Now I would like you to consider this sentence," he said, "and then tell me how you would punctuate it. 'A lady was passing along the street smiling pleasantly.'"

The pause was merely momentary. Briskly came this suggestion from a member of the class:

"What about a dash after the lady, sir?"

Right the First Time

"Mr. Jiggers," asked the professor in the freshman class, "what three words are used most among college students?"

"I don't know," said the student.

"Correct," replied the professor.

HELP IS NEAR

"Some of the greatest problems of American life are yet struggling for solution."
"Yes, but don't worry. Graduation day essays are on the way. They'll settle 'em."

TRADE PUBLICATIONS

Distinctive Floors. The Bonded Floors Company, Inc., of Philadelphia, Pennsylvania, has just issued a new booklet entitled Distinctive Floors. This booklet discusses the superiority, quality and artistic design of Gold-Seal Threadlite Tile and illustrates several designs and color combinations. The Gold-Seal Rubber Tile is also fully discussed in this booklet. This floor besides being resilient is quiet, sanitary and durable, which makes it very desirable for school use especially for laboratories, cafeterias, etc.

A Movie of Educational Interest—The Problem of Housing School Children. Circle A Products Corporation, Champaign, Ill. The Circle A Products Corporation has issued a pamphlet showing in regular order the details connected with the laying of the foundation and erection of Circle A school buildings. Photograph No. 1 shows the building of the foundation and laying of the flooring; No. 2 shows the setting up and bolting together of the various ready-built sections; No. 3 shows the appearance of the structure with the sections complete; No. 4 shows the construction and appearance of the roof, and No. 5 shows the completed building with all accessories in place and the building ready for use.

Physical Education, Recreation, and Play. The Educational Department of the Victor Talking Machine Company has just issued a very interesting booklet entitled "The Victrola in Physical Education, Recreation, and Play." Since many of the states are now requiring that all of the school children be given physical training in some form or another, the Victrola is extending great service to the schools of the country. Mimetic play, gymnastic stories, rhythms, drills, singing games, and interpretative dancing, which form an important part in many schools' physical education, together with numerous folk dances are listed, described and illustrated in the booklet. A copy of this publication may be had free upon request to any dealer in Victor products.

TRADE PRODUCTS

Cleaning Blackboard Erasers Made Easy—The suction of vacuum principle as successfully applied to the cleaning of blackboard erasers in the Little Giant Electric Blackboard Eraser makes this process a simple one and eliminates all the disagreeable features of the old method of removing chalk and dust from erasers. Clean erasers are assured by this mechanical cleaning method by means of which all erasers in a school can be cleaned daily in a few minutes.

The Little Giant Eraser Cleaner illustrated is constructed of malleable iron and aluminum and is operated by a General Electric Universal Motor—adaptable to all electric currents. It is provided with Underwriters' Lamp Cord with Universal plug ready to attach to any lamp socket making it convenient to use in any part of the schoolbuilding.

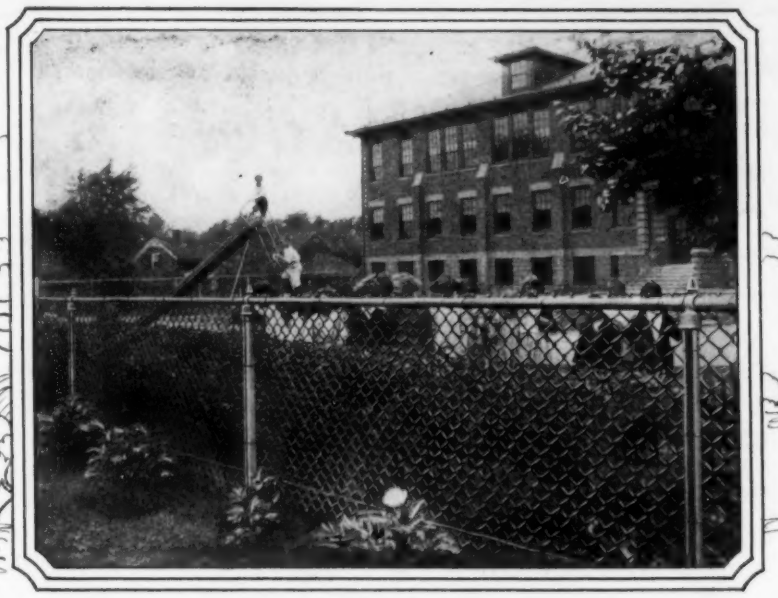
The Little Giant Blackboard Eraser Cleaner is manufactured by the James Lynn Company, 14 E. Jackson Blvd., Chicago, Ill.

Smart Boy

Pupil: Would you think it right to punish a boy for something he had not done?

Teacher: No, of course I shouldn't.

Pupil: Well, I haven't done any of my lessons.—Youth's Companion.



Make Play-time a *Safe-time for* Children

Outdoor School, Hartford, Conn. Schoolyard adequately protected by an Anchor Post Chain Link Fence.

Safe from traffic dangers. Municipal Playground at Bayside Park, Jersey City, N. J.

Anchor-Weld Railing and Gate, surrounding the Hartford High School, Hartford, Conn.

HAPPY, carefree schooldays:— those glorious days of boyhood and girlhood. Wonderful memories! Who would give them up?

And yet, this very hour, for many little maimed bodies, happy schooldays are no more. Today, here and there, perhaps in your city or town, some little boy or girl will laugh and frolic for the last time.

Speeding automobiles!

To help *Make Play-time a Safe-time for Children* is an enjoyable but very important and serious part of our business. Throughout the country, at schools and playgrounds, Anchor Post Fences are unfailingly protecting thousands of youngsters against ever-present traffic dangers.

If your schoolyards or playgrounds are still unprotected—the nearest Anchor Post Protection Specialist can be of real service to you. Just phone, write or wire for him.

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EUCLID, OHIO 21500 St. Claire Ave.
DETROIT, MICH. Penobscot Bldg.
HARTFORD, CONN. 902 Main St.
MINEOLA, L. I., N. Y. 167 Jericho Turnpike
WILKES-BARRE, PA. 300 Coal Exchange Bldg.
PHILADELPHIA, PA. Real Estate Trust Bldg.
PITTSBURGH, PA. 541 Wood St.
ROCHESTER, N. Y. 48 Berry St.
ST. LOUIS, MO. 604 La Salle Bldg.

South Street School, Newark, N. J. An installation of Anchor Post Chain Link Fence, 18′ high.

Anchor Post Chain Link Fence at public school, Purchase, New York.

Columbian Playground, East Orange, N. J. Here, an Anchor-Weld Railing and Gate provide unfailing protection.

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FIRM - *because Anchored* PERMANENT - *because Galvanized*

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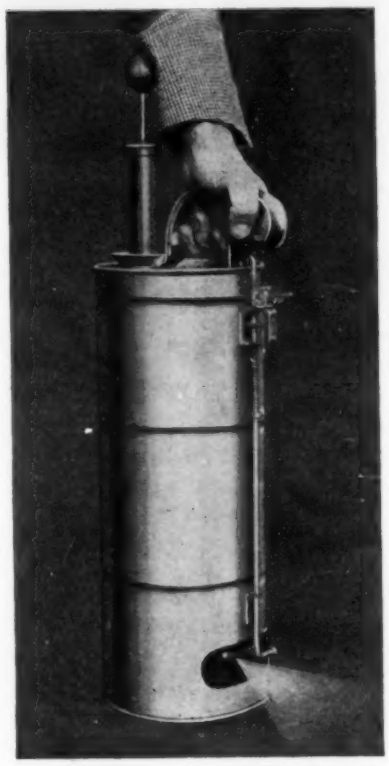
If we have served you before, we know we will serve you again; if you have never used Myco brand, your first order will be a step towards economy and efficiency.

School boards all over the United States have recently discovered what New Englanders have known for years — that Myco Spray Oil is the one solution to the important problem of clean floors in the schools.



Told by Superintendents:

"We have used Myco Floor Oil for several years in local school buildings. We have continued to use them because we have found them to be more economical than any other on the market."

"We have used your Spray Oil for the past ten years and are very glad to recommend your goods and service."

"I want to express my gratitude for having been made acquainted with your Floor Oil."

"We are well satisfied with the Floor Oil received from you in December."

"Please send us at once three barrels Myco Spray Oil. Please hasten this shipment as we are entirely out of floor oil."

"The quality of your goods has been as represented; prices have been right; delivery prompt."

"It gives me great pleasure to say that during the past ten years we have used floor oil put out by your company, and, in my belief, it is unsurpassed."

Myco Pneumatic Floor Oiler is the result of *years* of careful study for a satisfactory sprayer. This oil sprayer with Myco Oil is a most economical way of oiling School Room floors. It is simple to operate. The Myco Oil is put in the tank, pressure is pumped up and the sprayer sprays an even, light layer of oil on the floor. Floors will not become greasy or dirty and the dust will be settled as well as the wood preserved. Even after using Myco Spray Oil over a period of years your floors will still have a bright, fresh, clean appearance and retain the same color as the day they were laid.

The complete line of Myco Cleaning Supplies includes Cedar Spray, Floor Oil, Liquid Soap Dispensers. Disinfectants, Pine Coal Tar, Linseed Oil Soap, Brooms, Mops, Toilet Paper, Paper Towels, Floor Brushes, Turkey Feather Dusters, etc. Our illustrated booklet entitled, "Everything to Keep Your Buildings Clean and Sanitary," will be gladly sent on request.

Myco Spray Oil has been approved by the National Board of Fire Underwriters as a suitable oil for school floors with no danger from fire.

OUR SUCCESS REPRESENTS CONFIDENCE WON BY INTEGRITY

MASURY-YOUNG COMPANY

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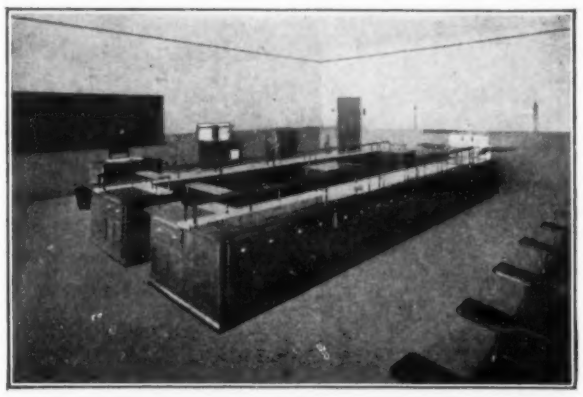

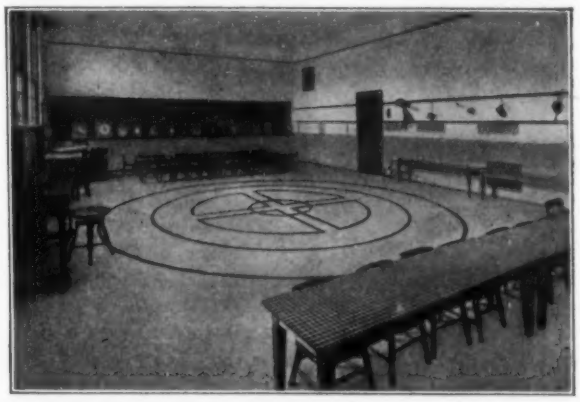

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Without obligating myself in any way please submit tentative estimates on the cost of your product installed complete for our building.....; below are the approximate areas involved.

Floor.....Sq. Ft. Sanitary Base.....Lineal Ft. Wainscot.....Sq. Ft.

I have checked below the floor troubles we now have.

Our floors are

☐ New Concrete	☐ Cracking	☐ Cold	☐ Slippery
☐ Cement Finish	☐ Dusting	☐ Splintering	☐ Unsanitary
☐ Wood	☐ Noisy	☐ Rough	☐ Rotting

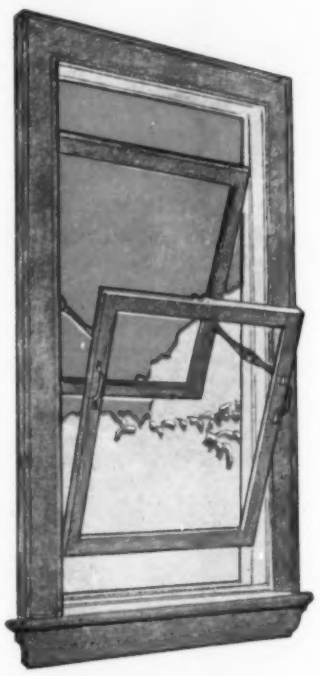
Name.....

Firm.....

Address.....

☐ Please send Illustrated Bulletin on School Floors.

Audubon School, New Orleans, La., Equipped Throughout With Austral Windows.
E. A. Christy, Architect.



How Austral Windows operate. Note that over 80% of the opening is available for ventilation as against only 50% with old style pulley sash. There is nothing to get out of order or wear out. Cleaning and reglazing done from inside of room.

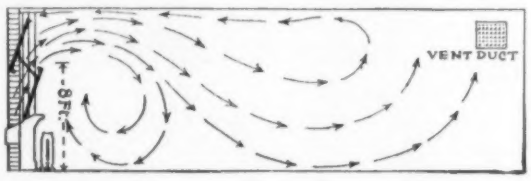
Why Fan Equipped Schools Use Austral Windows

Many schools equipped with elaborate, mechanical ventilating systems also use Austral Windows. This is proof positive of their economic value.

During the mild weather of Spring and Fall, and frequently during the entire school year, Austral Windows effectively take the place of the mechanical systems. They furnish pure, draughtless air from the great outdoors, and afford material savings in operating costs.

During the Winter months the added light that they give, the positive control of light that they offer, their economy of maintenance both for reglazing and cleaning, more than doubles their value.

All of these points are clearly set forth in our catalog. You are welcome to a copy.



This shows the progress of air in an Australized room. Air enters high enough in room to escape children near windows. Warm air forced out top opening by fresh incoming air.

AUSTRAL WINDOW COMPANY

ARCHITECT'S BUILDING

REPRESENTATIVES IN PRINCIPAL CITIES

101 PARK AVE. NEW YORK CITY